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CROP PRODUCTION

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CEREALS AND MILLETS

CROP : RICE

- The scientific name of rice is**
 - Oryza sativa*
 - Oryza glaberima*
 - Both A&B
 - None of these
- Rice belonging to which family?**
 - Gramineae
 - Poaceae
 - Grass family
 - All of these
- Origin place of rice is**
 - SEA(south east asia)
 - USA
 - Indo- Burma
 - A & C both
- Sowing time of Aus rice is**
 - June-july
 - Mar-april
 - April-may
 - May-june
- Aus rice is also known as**
 - Aman rice
 - Boro rice
 - Autumn rice
 - None of these
- Sowing time of Aman rice is**
 - June-July
 - Mar-april
 - May-june
 - Dec-jan
- Sowing time of Boro rice is**
 - Nov-dec
 - Dec-Jan
 - Oct
 - July –august
- Aman rice is also called as**
 - Kharif rice
 - Winter rice
 - Both A & B
 - None of these
- Boro rice is called as**
 - Summer rice
 - Winter rice
 - Kharif rice
 - None of these
- In which rice lodging doesn't occur**
 - Indica rice
 - Japonica rice
 - Javanica rice
 - All of these
- Panicle is a type of inflorescence of which crop?**
 - Rice
 - Lentil
 - Urd
 - Soybean
- Lemma + palea together called as**
 - Hull
 - Hull-lemma
 - Palea-hull
 - None of these
- In SRI system of rice "S" stands for**
 - System
 - Shallow
 - Same
 - None of these
- SRI concept is increasing productivity of rice by changing management of**
 - Plant
 - Soil
 - Water & nutrient
 - All of these
- SRI first developed at which place**
 - China
 - USA
 - Madagascar
 - USSR
- SRI sytem developed in the year**
 - 1963
 - 1983
 - 1945
 - 1993
- SRI system developed by**
 - Fr. H. D Launie
 - H. (d) Peter
 - M. S. Swaminathon
 - N. E. Borlaug
- Yield of rice is increased by adopting SRI is**
 - 50-60%
 - 30%
 - 50%
 - 50-90%
- Rice is a which type of plant**
 - Short Day Plant
 - Long Day Plant
 - Day neutral Plant
 - None of these
- Self pollination occurs in**
 - Bajra
 - Mustard
 - Jawar
 - Paddy

21. **Test weight of Basmati rice is**
 (a) 24 gm (b) 26gm
 (c) 22gm (d) 21gm
22. **Cardinal temperature of rice is**
 (a) 15-20°C (b) 20-25°C
 (c) 40-45°C (d) 30-32°C
23. **Hulling % of rice is**
 (a) 60-65% (b) 30-50%
 (c) 80-85% (d) 45-55%
24. **First variety of rice is**
 (a) NT-1 (b) Jaya
 (c) NR-8 (d) TN-1
25. **Jagannath is the mutant variety of**
 (a) Rice (b) Wheat
 (c) Barley (d) Oat
26. **Jagannath is the mutant variety of**
 (a) TN-1 (b) T-14
 (c) TN-41 (d) TN-141
27. **World's 1st high yielding variety of rice developed by**
 (a) ICAR (b) IARI
 (c) IRRI (d) CRRRI
28. **Maximum rice exporter country is**
 (a) USA (b) China
 (c) India (d) Thailand
29. **SRI is introduced first time in India at**
 (a) Punjab (b) Tamil Nadu
 (c) Haryana (d) West Bengal
30. **Which rice variety is released by private sector**
 (a) PHB-30 (b) PHB-71
 (c) Jaya (d) Ratna
31. **Most critical stage of rice is**
 (a) Tillering (b) Jointing
 (c) Rooting (d) Booting
32. **Fruit of rice is called**
 (a) Achene (b) Grain
 (c) Cereal (d) Caryopsis
33. **Widely used N-fertilizer in rice is**
 (a) Ammonium sulphate (b) Calcium sulphate
 (c) Urea (d) DAP
34. **White eye of rice is due to**
 (a) Ca (b) Mg
 (c) S (d) Fe
35. **Killer disease of rice is**
 (a) Bacterial blight (b) Tungo virus
 (c) Gram leaf hopper (d) Both A & B
36. **Chromosome number(2n) of rice is**
 (a) 42 (b) 24
 (c) 36 (d) 56
37. **2n=24 is the chromosome of which crop-plant**
 (a) Bajra (b) Ragi
 (c) Wheat (d) Rice
38. **Gas emitted from rice field is**
 (a) CH₄ (b) CH₃
 (c) CO₂ (d) CO
39. **H₂S cause which disease in rice crops**
 (a) Blight (b) Leaf spot
 (c) Root rot (d) Akiochi
40. **Highest N losses in rice field by**
 (a) Leaching (b) Run-off
 (c) Percolation (d) Denitrification
41. **Paira & Utera cropping system is closely related to**
 (a) Wheat (b) Rice
 (c) Barley (d) Bajra
42. **Puddler is related to which crop plant**
 (a) Wheat (b) Rice
 (c) Barley (d) Bajra
43. **Hydrothermal treatment of rice grain before milling is termed as**
 (a) Boiling (b) Parboiling
 (c) Water treatment (d) None of these
44. **Which vitamin is conserved by par-boiling of rice**
 (a) Vit-c (b) Vit-D
 (c) Vit-B (d) Vit-B12
45. **Seed rate in dapog method for rice**
 (a) 3-4kg/sq.m (b) 10kg/sq.m
 (c) 15kg/sq.m (d) 8kg/sq.m
46. **Area required for seedling preparation in DAPOG method is**
 (a) 40-50cm² (b) 70-80cm²
 (c) 75-85cm² (d) 25-30cm²
47. **Miracle rice of India is**
 (a) Padma (b) Pusa Rh-10
 (c) Sita (d) Jaya
48. **Gene responsible for dwarfness in rice is**
 (a) N-10 (b) Teasinata
 (c) Oryzin-10 (d) Dee-geo-woo-gene
49. **Khaira disease of rice is due to deficiency of**
 (a) Fe (b) B
 (c) P (d) Zn
50. **Optimum soil pH required for growing rice is**
 (a) 7-8 (b) 6-7
 (c) 3-4 (d) 4-6

51. **First super aromatic basmati rice is**
 (a) Jaya (b) Padma
 (c) Pusa basmati (d) Pusa Rh-10
52. **Saline tolerant rice variety is**
 (a) Sita (b) Jaya
 (c) Bala (d) SR-26B
53. **Vikramarya rice variety is resistant to**
 (a) GLH (b) BPH
 (c) Rice hopper (d) Tungo virus
54. **Ajaya rice variety is resistant to**
 (a) Brown leaf hopper (b) Gall midge
 (c) Stem rot (d) Bacterial blight
55. **Phalguna rice variety is resistant to**
 (a) BLH (b) GLH
 (c) YPH (d) Gall midge
56. **Total no. of districts of India growing rice are**
 (a) 500 (b) 700
 (c) 900 (d) 564
57. **The Bio-Herbicide used in rice crop is**
 (a) Devine (b) Bio-sedge
 (c) Both A & B (d) Collego
58. **Golden rice is rich in**
 (a) Vit.C (b) Vit.D
 (c) Vit.E (d) Vit.A
59. **“More for Less” slogan of SRI belongs to which state**
 (a) Tripura (b) Nagaland
 (c) Punjab (d) Tamil Nadu
60. **Principle aroma compound responsible for unique flavor of basmati rice is**
 (a) di acetyl-1-propaline (b) di acetyl-2-propaline
 (c) acetyl-di-propaline (d) acetyl amine
61. **Basmati rice of superfine grain has more than mm length**
 (a) 5.5 (b) 6.5
 (c) 4.0 (d) 8.5
62. **The opaque areas in the translucent endosperm of rice grain are known as**
 (a) belly white (b) white belly
 (c) dark belly (d) opaque belly
63. **Largest area occupying state of India in rice is**
 (a) Tamilnadu (b) Karnataka
 (c) Rajasthan (d) West Bengal
64. **Which state was No.1 for rice production in india in 2011**
 (a) Tamilnadu (b) Karnataka
 (c) Uttar Pradesh (d) Andhra Pradesh
65. **Which state was no. 2 for rice production in the year 2011**
 (a) UP (b) MP
 (c) Punjab (d) West Bengal
66. **Which state of india is having highest productivity in rice**
 (a) Gujrat (b) Haryana
 (c) MP (d) Punjab
67. **Vector of rice tungo virus is**
 (a) Brown hopper (b) Yellow borer
 (c) Gall midge (d) GLH
68. **In which disease of rice Krsek symptom is found**
 (a) Tungo (b) Khaira virus
 (c) Stem rot (d) Bacterial blight
69. **Udabatta disease is related to which crop plant**
 (a) Barley (b) Bajra
 (c) Wheat (d) Rice
70. **Project Directorate of Rice Research is situated at**
 (a) Meerut, UP (b) Durgapur, Jaipur
 (c) Cuttack, odisha (d) Hyderabad, AP
71. **Ufra disease is mostly caused by a agent in a rice crop is**
 (a) Bacteria (b) Fungi
 (c) Algae (d) Nematode
72. **World’s first super rice variety for saline & alkaline condition is**
 (a) Jaya (b) Padma
 (c) Sita (d) Lunishree
73. **‘Text book of Rice Agronomy’ book is written by**
 (a) Borlaug (b) M. S. Swaminathan
 (c) CT Patel (d) Rajindra Prasad
74. **How much % rice grown and consumed in Asia**
 (a) 80% (b) 60%
 (c) 70% (d) 90%
75. **Rice is having protein content of**
 (a) 3-4% (b) 10%
 (c) 10-12% (d) 6-7%
76. **Rice is having fat content of**
 (a) 5% (b) 10%
 (c) 8% (d) 2-3%
77. **How much litre of water is required for the production of one kg rice**
 (a) 400 (b) 500
 (c) 4000 (d) 5000
78. **Rice grain is generally rich in**
 (a) Vitamin.D (b) Vitamin.C
 (c) Tryptophane (d) Lysine

79. **The main protein in rice is**
 (a) Glutin (b) Zein
 (c) Keratin (d) Oryzein
80. **Most widely used post-emergent herbicide in rice is**
 (a) Stomp (b) Basaline
 (c) Atrazine (d) Propanil
81. **Which country occupies the highest area under rice**
 (a) China (b) Japan
 (c) USA (d) India
82. **Which country having highest production of rice**
 (a) India (b) USA
 (c) Japan (d) China
83. **Genus Oryza is having how many species**
 (a) 26 (b) 36
 (c) 34 (d) 24
84. **Out of 24 species of rice ,the no of cultivated species are**
 (a) 2 (b) 4
 (c) 7 (d) 9
85. **Indica rice is a**
 (a) Small stature (b) Medium stature
 (c) Both A& B (d) Tall stature
86. **Indica rice grown in which climatic condition**
 (a) Tropical condition (b) Subtropical condition
 (c) Both A & B (d) Temperate
87. **Japonica rice is mainly grown in which regions of India**
 (a) Tropical (b) Subtropical
 (c) Temperate (d) Both B & C
88. **Japonica rice is having what type of plant stature**
 (a) Large (b) Medium-tall
 (c) Both A& B (d) Small
89. **Javanica rice is grown in which country**
 (a) India (b) Japan
 (c) Africa (d) Indonesia
90. **Which of the following is wild type of rice**
 (a) Japonica (b) Indica
 (c) Both A&B (d) Javanica
91. **The Javanica rice is also termed as**
 (a) Aerobic rice (b) Cultivated rice
 (c) Indica rice (d) Balu rice
92. **Glaberrima rice is mainly limited to**
 (a) USA (b) Africa
 (c) Russia (d) West-africa
93. **Test weight of rice is**
 (a) 60gm (b) 70gm
 (c) 90gm (d) 25gm
94. **Rice stem is otherwise known as**
 (a) Stem (b) Shoot
 (c) Haulm(culm) (d) None of these
95. **Rice crop needs which type of climate**
 (a) Hot & moist (b) Hot & cool
 (c) Dry& humid (d) Hot& humid
96. **Rice is a which type plant**
 (a) Short day (b) C3 plant
 (c) Semi aquatic (d) All of these
97. **Under submerged condition, how the rice plant take atmospheric oxygen**
 (a) Through roots
 (b) Through stem
 (c) Through shoot
 (d) aerenchymatous tissue
98. **In North-west part of country which crop of rice is taken**
 (a) Rabi (b) Zaid
 (c) Both A&B (d) Kharif
99. **TN-1 variety was released in the year**
 (a) 1964 (b) 1949
 (c) 1969 (d) 1966
100. **First high yielding rice variety In the world is**
 (a) Jaya (b) APHR-49
 (c) TN-1 (d) IR-8
101. **Zn deficiency I rice was first reported by**
 (a) Dr.R.S.Paroda
 (b) Dr.M.S.Swaminathan
 (c) Dr.(b)P.Pal
 (d) Dr.Y.L.Nene
102. **Literally meaning of DEE GEO WOO gene is**
 (a) Brown tipped short legged
 (b) Blue tipped short legged
 (c) Brown tipped long legged
 (d) Brown tipped medium legged
103. **__Application reduces the severity of bacterial disease of rice**
 (a) P (b) K
 (c) Mg (d) Ca
104. **First high yielding semi dwarf variety of rice developed in India**
 (a) Bala (b) Jaya
 (c) Padma (d) S-23

- 105. Jaya variety of rice developed by**
(a) Dr. Kasana (b) Dr. Swaminathan
(c) Dr. Ahalawat (d) Dr. Shastri
- 106. Jaya variety of rice is developed by cross of**
(a) TN1 X T-141 (b) T-141 X Bala
(c) TN1 X Padma (d) T-141 X Swarna
- 107. Mutant variety of rice is**
(a) Sattari (b) Jagannath
(c) Both A & B (d) None of the above
- 108. Variety of rice suitable for direct seeding is**
(a) TKM-1 (b) Bala
(c) Jaya (d) IR-8
- 109. SITA is the variety of**
(a) Bajra (b) Maize
(c) Jawar (d) Rice
- 110. Seed rate of rice in broadcasting method**
(a) 60kg (b) 30kg
(c) 100kg (d) 80kg
- 111. Drilling method of sowing requires seed rate of**
(a) 90kg (b) 130kg
(c) 68kg (d) 60kg
- 112. Seed rate of hybrid rice is**
(a) 30kg/ha (b) 40kg/ha
(c) 60kg/ha (d) 15kg/ha
- 113. NPK(Kg/ha) recommendation for rice is**
(a) 100:60:60 (b) 100:30:30
(c) 120:60:40 (d) 80:30:30
- 114. Depth of oxidized zone in rice field is**
(a) 1-5mm (b) 15-20mm
(c) 30mm (d) 1-10mm
- 115. Reduced zone in rice field is**
(a) <5mm (b) 5-10mm
(c) 10mm (d) >10mm
- 116. N use efficiency of rice crop is**
(a) 30-40% (b) 50-55%
(c) 20% (d) 23%
- 117. Non symbiotic N-fixing bacteria which fixes atm N in rice**
(a) Azospirillum (b) Xanthomonas
(c) BGA (d) Azotobactor
- 118. In zinc deficiency, rice plant leaves become**
(a) Yellow and then dry (b) Green and then dry
(c) Brown and then dry (d) Purple and then dry
- 119. Khaira disease of rice was first reported by**
(a) Y. L. Gurjar (b) M. S. Swaminathan
(c) Dr. Shastri (d) Y.L. Nene
- 120. Khaira disease of rice was first reported in which year**
(a) 1966 (b) 1960
(c) 1950 (d) 1995
- 121. Khaira disease of rice was first reported at which place**
(a) Pantnagar (b) Coimbatore
(c) Karnataka (d) Jorhat
- 122. Iron toxicity in rice is known as**
(a) Reddening (b) Yellowing of leaves
(c) Pinking of rice (d) Browning of rice
- 123. Which of the following practices are related to rice crop**
(a) Beushening (b) Puddling
(c) Transplanting (d) All of these
- 124. The main objective of puddling is to reduce the**
(a) Weed infestation (b) Nutrient availability
(c) Percolation losses (d) None of these
- 125. DAPOG method is introduced from**
(a) Japan (b) China
(c) Egypt (d) Philippines
- 126. Mat type of nursery is related to which crop**
(a) Wheat (b) Pearl millet
(c) Barley (d) Rice
- 127. The length of extra long rice grain is**
(a) 3mm (b) 5mm
(c) 6mm (d) >7mm
- 128. Reclamation disease of cereal is due to deficiency of**
(a) Fe (b) Mn
(c) Zn (d) Cu
- 129. Which species of rice are cultivated**
(a) Oryza sativa (b) Oryza glaberrima
(c) Both A & B (d) None of these
- 130. Indica rice is**
(a) Early maturing (b) Medium maturing
(c) Late maturing (d) None of these
- 131. Japonica rice is**
(a) Early maturing (b) Medium maturing
(c) Late maturing (d) None of these
- 132. TN-1 was developed in**
(a) Japan (b) America
(c) Pakistan (d) Taiwan
- 133. IR-8 was developed by**
(a) Henry m. rock (b) Herajit singh
(c) NE Borlaug (d) H. M. Beachel

134. **Padma variety of rice developed by reverse cross of which variety of rice plant's parent**
 (a) T-141 (b) TN-1
 (c) Bala (d) Jaya
135. **Parents of padma variety is**
 (a) TN1 X T-141 (b) T-141 X Bala
 (c) T-141 X Swarna (d) T-141X TN-1
136. **Bronzing of leaves in rice is due to**
 (a) Fe toxicity (b) Fe deficiency
 (c) B toxicity (d) B deficiency
137. **In rice export the place of India in world is**
 (a) 4th (b) 6th
 (c) 3rd (d) 1st
138. **Iron toxicity is the major problem to rice production in which type of soil**
 (a) Alkaline soil (b) Neutral soil
 (c) Both A&B (d) Highly acidic soil
139. **Butachlor application time in rice is**
 (a) PPI (b) Post-emergence
 (c) Fallow application (d) Pre-emergence
140. **V-shaped rice cultivation is given by**
 (a) Yoshida (b) (c) T. Patel
 (c) Y. L. Ping (d) Matsushima
141. **V-shaped rice cultivation was developed in the year**
 (a) 1978 (b) 1992
 (c) 1970 (d) 1967
142. **Ideal age for transplanting rice seedling at**
 (a) 1-2 leaves (b) 10-12 leaves
 (c) 8-9 leaves (d) 4-5 leaves
143. **Hopper burnt symptom is due to**
 (a) Brown plant hopper (b) Green leaf hopper
 (c) Black plant hopper (d) aphids
144. **Parallel white streaks on leaf lamina is due to**
 (a) Rice hispa (b) Gall midge
 (c) yellow stem borer (d) Rice caseworm
145. **Rice covers how much % of total arable area of world**
 (a) 5% (b) 6%
 (c) 9% (d) 10%
146. **Rice provides how many percent of global human per capita energy**
 (a) 20% (b) 15%
 (c) 25% (d) 21%
147. **How much percentage of rice is trade of world's rice from India**
 (a) 10% (b) 20%
 (c) 25% (d) 6-7%
148. **Rice provides how many percent of global human per capita protein**
 (a) 10% (b) 20%
 (c) 30% (d) 15%
149. **Ufra disease is caused due to**
 (a) *Ditylenchus angustus*
 (b) *Rhadophylus*
 (c) *Longidorus*
 (d) *Anguinia tritici*
150. **LCC consists of strips of different shades from pale green to dark green**
 (a) 4 (b) 5
 (c) 6 (d) 8
151. **In aerobic rice more tillers are expected than submerged rice because of better _____**
 (a) Nutrient uptake (b) Water use
 (c) Aeration (d) Variety
152. **In Dapog nursery method adopted in paddy cultivation, seedlings are transplanted at the age of _____ days**
 (a) 8 (b) 14
 (c) 20 (d) 25

CROP: WHEAT

153. **In India, gene bank of wheat is located at-**
 (a) IARI, New Delhi (b) Ludhiana
 (c) Kanpur (d) Karnal
154. **Among the following crop rotations, which is good for increasing soil nutrient status –**
 (a) Groundnut-wheat (b) Rice-wheat
 (c) Pearl millet-Wheat (d) Sorghum-Wheat
155. **“CIMMYT” is an organisation working for the improvement of-**
 (a) Rice and Cotton (b) Pulses and Oilseeds
 (c) Dryland Agriculture (d) Wheat and Maize
156. **In dwarf wheat, sowing depth is related to**
 (a) length of radicle (b) length of coleoptile
 (c) humidity (d) temperature
157. **Which weedicide is used to kill broad leaf weeds in wheat-**
 (a) 2,4-(d)S.S. (WPSS) (b) 2,4,5-T
 (c) 2,4-DB (d) None of these
158. **Production target of wheat for the year 2014-15 is-**
 (a) 94 mt (b) 92 mt
 (c) 90 mt (d) 96 mt
159. **Indicator plant for copper is-**
 (a) Maize (b) Wheat
 (c) Sorghum (d) Potato

160. Directorate of Wheat Research(DWR) is located at-
 (a) Hyderabad (b) New Delhi
 (c) Karnal (d) Bikaner
161. The first wheat variety having short plant height, lodging resistant and higher grain yield was
 (a) Norin-10 (b) Lerma Rojo 64 A
 (c) Sonaro-64 (d) None of these
162. Maximum area under wheat-
 (a) India (b) China
 (c) USA (d) Russia
163. Which of the following crop has the highest cultivated area in the world?
 (a) Rice (b) Wheat
 (c) Barley (d) Bajra
164. The most suitable variety for late sow condition is-
 (a) Kalyansona (b) Sonalika
 (c) Raj.3077 (d) WH-147
165. Triticale is a cross between-
 (a) wheat and rye (b) oat and barley
 (c) wheat and barley (d) None of these
166. Wheat germination(90%) takes place after how many days?
 (a) 3-4 (b) 4-5 (c) 5-6 (d) 4-8
167. In case of availability of 2 irrigations for wheat, most critical stages for irrigation is-
 (a) CRI stage and flowering
 (b) Flowering and grain formation
 (c) Joint and dough
 (d) Tillering and flowering.
168. Recommended seed rate of late sown wheat-
 (a) 150-200 kg/ha (b) 80-100 kg/ha
 (c) 60-80 kg/ha (d) 125- 150 kg/ha
169. To obtain maximum yield of wheat, the number of tillers per square metre required is-
 (a) 100 (b) 250
 (c) 500 (d) 750
170. Loose smut of wheat is caused by-
 (a) *Xanthomonas oryzae* (b) *Ustilago Tritici*
 (c) *Puccinia graminis* (d) *Puccinia recondita*
171. Which plant disease of wheat can be controlled by seed treatment with hot water-
 (a) Rust (b) Loose smut
 (c) Bunt disease (d) None of these
172. Which pesticide is used for control of termite in wheat?
 (a) Rogor (b) Chlorpyrifos
 (c) Monocrotophos (d) None of these
173. Herbicide avadex is used in which crop?
 (a) Cotton (b) Wheat
 (c) Rice (d) None of these
174. What is the recommended rate of application of the herbicide metsulfuron in wheat?
 (a) 4g/ha (b) 10g/ha
 (c) 16g/ha (d) 20g/ha
175. The herbicide Carfentrazone is used to control weeds in-
 (a) Wheat (b) Maize
 (c) Paddy (d) Cotton
176. The optimum temperature for wheat germination is-
 (a) 25-27 °C (b) 20-22 °C
 (c) 15-17 °C (d) 10-12 °C
177. Loose smut of wheat is a disease –
 (a) Internally seed borne
 (b) Air-borne
 (c) Soil – borne
 (d) Externally seed borne
178. The sowing depth of dwarf wheat varieties is-
 (a) 6-7 cm (b) 2-3 cm
 (c) 4-5cm (d) 5-6 cm
179. Stem melanosis disease occur in wheat due to deficiency of-
 (a) Mn (b) Cu
 (c) Si (d) Zn
180. Optimum temperature range for sowing of wheat is-
 (a) 10-15 °C (b) 15-20 °C
 (c) 20-25 °C (d) 25-30 °C
181. The base temperature of wheat crop is-
 (a) 4.5 °C (b) 7.0 °C
 (c) 8.5 °C (d) 10.0 °C
182. Name the crop that will require maximum seed to sow one hectare are-
 (a) Wheat (b) Maize
 (c) Rice (d) Gram
183. The causal organism of Karnal bunt of wheat is-
 (a) *Neovosia indica*
 (b) *Macrophomina phaseolina*
 (c) *Tilletia caries*
 (d) *Puccinia graminis*
184. In India, mechanisation Index is highest for which crop-
 (a) Paddy (b) Wheat
 (c) Maize (d) Sugarcane

- 185. Which state of India leads in area under wheat crop-**
 (a) Rajasthan (b) U.P.
 (c) Punjab (d) M.P
- 186. The centre of origin of *Triticum aestivum* is-**
 (a) Near eastern region (b) Mediterranean centre
 (c) South Mexican centre (d) Chilean centre
- 187. Number of Wheat growing zones in India is-**
 (a) 4 (b) 6
 (c) 10 (d) 15
- 188. Most important and productive wheat contributing zone is-**
 (a) North western plains (b) North eastern plains
 (c) Central zone (d) Peninsular zone
- 189. Percentage area share of *T.aestivum* wheat cultivation in India is-**
 (a) 87 (b) 60
 (c) 12 (d) 69
- 190. Best suited soils for cultivation of wheat is-**
 (a) Loamy soils (b) Clay loamy soils
 (c) Both a and b (d) Clay soils
- 191. First dwarf wheat variety released commercially in India during 1965 is-**
 (a) Sonaro 64 (b) Lermaroja 64 A
 (c) Sonaro 63 (d) Both a and b
- 192. *T aestivum* is exclusively grown in-**
 (a) North western plain zone
 (b) North eastern plain zone
 (c) both a and b
 (d) Northern hill zone
- 193. Which of the following wheat variety is drought resistant?**
 (a) Narmad 4 (b) K 68
 (c) NP 890 (d) All of these
- 194. Which of the following wheat variety with more gluten and is suitable for biscuit making?**
 (a) Sonalika (b) HD 2285
 (c) PBW 175 (d) All of these
- 195. Wheat variety mature without affecting seed quality under depletion of soil moisture and Increased temperature is-**
 (a) Halua (b) HD 2402
 (c) HD 2189 (d) Both a and b
- 196. Best source of N fertilizer for higher wheat production is-**
 (a) CAN (b) Ammonium sulphate
 (c) both a and b (d) Urea
- 197. National average productivity of wheat is-**
 (a) 1.2-1.4 t/ha (b) 2.0-2.4 t/ha
 (c) 3.0-3.5 t/ha (d) 5.0-5.5 t/ha
- 198. Most prominent crop used under mixed cropping of wheat is-**
 (a) Mustard (b) Chickpea
 (c) Linseed (d) All of these
- 199. Most commonly followed wheat sowing method is-**
 (a) Sowing behind plough (b) Drilling
 (c) Dibbling (d) None of these
- 200. Under irrigated condition which is the optimum time for sowing wheat?**
 (a) 1st fortnight of Oct (b) 2nd fortnight of Oct
 (c) 1st fortnight of Nov (d) 2nd fortnight of Nov
- 201. Under rainfed condition, optimum time of sowing for wheat is-**
 (a) 1st fortnight of Oct (b) 2nd fortnight of Oct
 (c) 1st fortnight of Nov (d) 2nd fortnight of Nov
- 202. Which part of India produces best quality wheat?**
 (a) North India
 (b) Peninsular India
 (c) Maharashtra, Gujarat, M.P
 (d) both b and c
- 203. Which is called as King of cereals?**
 (a) Wheat (b) Rice
 (c) Maize (d) Sorghum
- 204. Grain to straw ratio in most of the Mexican wheat varieties is-**
 (a) 1:1 (b) 2:1
 (c) 3:1 (d) 1:2
- 205. Which one is the most important grain crop in the world?**
 (a) Wheat (b) maize
 (c) sorghum (d) barley
- 206. Cultivation of durum wheat is primarily confined to –**
 (a) Central India
 (b) Southern India
 (c) Central and Southern India
 (d) U.P hills
- 207. The disease in which NaOH test was used is-**
 (a) Karnal bunt (b) Loose smut
 (c) Brown rust (d) Yellow rust
- 208. Wheat is a..... type of crop**
 (a) C3 & LDP
 (b) C4 & LDP
 (c) Both C3 & C4 but SDP
 (d) Depends on the variety

- 209. The type of internodes in wheat is**
 (a) Tapered and hollow (b) Angular and solid
 (c) Cylindrical and solid (d) Cylindrical and hollow
- 210. Short days increases of wheat plant**
 (a) Vegetative growth (b) Flowering period
 (c) Maturity (d) All of the above
- 211. The wheat species containing A, B & D genomes are**
 (a) Triploid (b) Diploid
 (c) Hexaploid (d) None of these
- 212. Black rust of wheat is caused by**
 (a) Puccinia graminis (b) Puccinia striiformis
 (c) Puccinia recondita (d) all the above
- 213. In karnal bunt, black powder gives foul smell due to presence of**
 (a) dimethyl amine (b) trimethyl amine
 (c) trimethyl amine (d) dimethyl amine
- 214. The ploidy level of cultivated wheat is best represented as**
 (a) Hexaploid (b) Tetraploid
 (c) Segmental hexaploid (d) None of these
- 215. The other name of Triticum tauschii is**
 (a) Ageilops squarrosa
 (b) Ageilops speltoides
 (c) Agropyron
 (d) Triticum monococcum

CROP: OATS

- 216. The optimum temperature range for sowing of oat is**
 (a) 10-12°C (b) 15-20°C
 (c) 12-15°C (d) 25-30°C
- 217. The Inflorescence in *Avena sativa* is called**
 (a) Siliqua (b) Panicle
 (c) Spike (d) Ear
- 218. Oat crop planted at a spacing of 20×10cm will have.....plants/ha**
 (a) 5,00,000 (b) 1,00,000
 (c) 1,25,000 (d) 2,50,000
- 219. The recommended seed rate for oat is _____ kg/ha**
 (a) 50-60 (b) 12-15
 (c) 15-18 (d) 75-90
- 220. Oat crop needs**
 (a) Warm and humid climate
 (b) Hot and humid climate
 (c) Dry and hot conditions
 (d) Cold and dry climate
- 221. Which one is the most critical period for irrigation in oat**
 (a) Tillering (b) CRI
 (c) Jointing (d) Flowering
- 222. The normal seed rate of oat is**
 (a) 50 kg/ha (b) 60kg/ha
 (c) 100kg/ha (d) 125kg/ha
- 223. Grey speck disease of oat is due to**
 (a) Mn (b) Zn
 (c) Cu (d) Mg
- 224. Wild oat is**
 (a) Avena fatua (b) Sorghum bicolor
 (c) Panicum miliacium (d) Avena sativa
- 225. The centre of origin of oats**
 (a) Asia minor (b) Eastern Africa
 (c) India (d) Ethiopia
- 226. Leaf of oat is**
 (a) Sessile (b) Petiolate
 (c) Both (d) None of these
- 227. *Avena sativa* is**
 (a) Diploid (b) Tetraploid
 (c) Hexaploid (d) Heploid
- 228. Grey speck disease of oat is due to**
 (a) Virus (b) Bacteria
 (c) Fungus (d) Nutritional
- 229. The critical stage for the irrigation of oats**
 (a) Tillering (b) Flag leaf
 (c) Flowering (d) Booting
- 230. Shoot of oat is**
 (a) Hollow
 (b) Solid except at nodes
 (c) Solid
 (d) Hollow except at nodes

CROP: MAIZE

- 231. Botanical name of Maize**
 (a) Oryza sativa (b) Zea mays
 (c) Sorghum bicolor (d) Pennisetum glaucum
- 232. Maize is originated from**
 (a) China (b) India
 (c) Mexico (d) Japan
- 233. Most critical stage of water in Maize crop is**
 (a) Tasselling stage (b) Silking stage
 (c) Both a and b (d) Dough stage
- 234. Suitable temperature for growing crop in maize**
 (a) 22 °C (b) 40 °C
 (c) 32 °C (d) 36 °C

- 235. Common herbicide used in Maize**
 (a) Atrazine (b) Simazine
 (c) Isoproturon (d) 2,4- D
- 236. First hybrid maize**
 (a) Deccan-103 (b) Prabhat
 (c) COH -3 (d) Ganga – 1
- 237. Double cross techniques of production of Maize introduced by**
 (a) N.E. Borlang (b) D. F. Jones
 (c) Mendal (d) GH Shull
- 238. On Maize plant first appearance is of**
 (a) Silk (b) Leaves
 (c) Tassel (d) Nodes
- 239. Maize is normally a**
 (a) Monoecious (b) Diecious
 (c) Hexaploid (d) Tetraploid
- 240. Maximum root zone depth for Maize**
 (a) 200-300 mm (b) 400-600 mm
 (c) 500-600 mm (d) 350- 450 mm
- 241. Protein content of Maize**
 (a) 10% (b) 8%
 (c) 12% (d) 11%
- 242. Water requirement in Maize**
 (a) 400-500mm (b) 600- 800 mm
 (c) 500- 800 mm (d) 600- 700 mm
- 243. Seed rate of hybrid Maize**
 (a) 25 kg /ha (b) 20 kg/ha
 (c) 24 kg/ha (d) 26 kg/ha
- 244. Which corn is mostly cultivated in India**
 (a) Pod corn (b) Soft corn
 (c) Flint corn (d) Waxy corn
- 245. Average Maize yield in India is**
 (a) 1000 kg/ha (b) 1800 kg/ha
 (c) 2500 kg/ha (d) 4000 kg/ ha
- 246. Maize cultivar performs well at low fertility level is**
 (a) Pusa hybrid 1 (b) Pusa hybrid 2
 (c) Both a and b (d) Vivek 5
- 247. Optimum N required for hybrid and composites of Maize are**
 (a) 80, 120 kg / ha (b) 120 , 80 kg/ha
 (c) 100, 60 kg / ha (d) 60, 100 kg/ ha
- 248. White bud of Maize symptom is due to**
 (a) Zn (b) Cu
 (c) Mo (d) N
- 249. Critical period of weed competition in Maize is**
 (a) 0- 30 days (b) 30-45 days
 (c) 45- 60 days (d) None of these
- 250. Rabi Maize yield are higher than *Kharif* Maize yield, because**
 (a) Better water management is possible
 (b) Better sunshine with extended duration
 (c) Lower night temperature and reduce photo respiration
 (d) All of these
- 251. In south India, which of the following crop can be inter cropped with Maize**
 (a) Fenugreek (b) Coriander
 (c) Cluster bean (d) All of these
- 252. Which type of Maize is early maturity one**
 (a) Dent corn (b) Flint corn
 (c) Pop corn (d) Flour corn
- 253. Rabi Maize are higher yield due to**
 (a) Higher leaf are index
 (b) Higher number of cobs / plant
 (c) Higher number of grain / cob
 (d) All of these
- 254. Consumptive use of water(mm/ day) in Maize is**
 (a) 1.0- 2.0 (b) 2.0-3.0
 (c) 2.5- 4.3 (d) 4.3- 6.0
- 255. Amino acid, rich of nutritional source of Maize imported from USA is**
 (a) Opaque -2 (b) Floury- 2
 (c) Both a and b (d) UZU
- 256. Which of the QPM hybrid/composite released in India?**
 (a) Shaktiman 2 (b) HQPM 1
 (c) Shakti 1 (d) All of these
- 257. Maize protein is deficient in**
 (a) Lysine
 (b) Betadine
 (c) Lysine and tryptophan
 (d) Tryptophan
- 258. Maize grow very well in the soil in p H ranging from**
 (a) 4.5- 6.5 (b) 6- 8.5
 (c) 5.5 – 7.5 (d) 7.5 – 8.5
- 259. Percentage protein in maize grain is about**
 (a) 2 (b) 5
 (c) 10 (d) 9.2
- 260. Variety of Maize high quantity of lysine**
 (a) Shakti (b) Vikram
 (c) Jawahar (d) Protina
- 261. Which crop is called “queen of cereal”.**
 (a) Rice (b) Wheat
 (c) Maize (d) Barley

262. Which one of the following crops is most sensitive to both excess moisture and drought
 (a) Direct seeded rice (b) Maize
 (c) Sunflower (d) Sorghum
263. Atrazine effectively control grasses in maize field without causing harm to the crop plants, as degradation of the chemical in maize plant occurs due to the presence of
 (a) R-Q enzyme (b) GSH enzyme
 (c) Aryl acyl amidase (d) Amylase
264. The crop grown in UP during all the three seasons is
 (a) Urd (b) Sorghum
 (c) Maize (d) Moong
265. Which cereal is not tillering in nature?
 (a) Maize (b) Wheat
 (c) Barley (d) Paddy
266. Which cereal has no wild form now in any form of the world with floral part resembling those of presently grown form
 (a) Maize (b) Wheat
 (c) Barley (d) Paddy
267. The gold of America is
 (a) Maize (b) Wheat
 (c) Bajra (d) Sorghum
268. Most commonly cultivated maize type in India is
 (a) Flint corn (b) Dent corn
 (c) Soft corn (d) Sweet corn
274. Which of the short duration sorghum variety suitable for rainfed condition
 (a) CSH1 (b) CSH3
 (c) Both a&b (d) None of these
275. Which of the following management practices is more problem in sorghum
 (a) Fertilizer management (b) Weed management
 (c) Water management (d) Bushening
276. Sorghum is considered as camel crop because of
 (a) deep root system
 (b) Resistance to drought
 (c) Shallow root system
 (d) Nutrient exhaustiveness
277. For *kharif* season seed rate of sorghum
 (a) 8-10kg/ha (b) 10-12kg/ha
 (c) 15-20kg/ha (d) 20-25 kg/ha
278. Most suitable time for sowing sorghum in North India is
 (a) June 1st week (b) June last week
 (c) July 1st week (d) July last week
279. The Directorate of sorghum Research Institute is located at
 (a) Cuttak (b) Coimbatore
 (c) Hyderabad (d) Bangalore
280. Most commonly followed method of planting sorghum in India is
 (a) Direct seeding in rows
 (b) Transplanting on raised beds
 (c) Direct seeding in puddled beds
 (d) Transplanting in standing water

CROP: SORGHUM

269. The centre of origin of sorghum is
 (a) India and Africa (b) America
 (c) South America (d) None
270. Best suited soil for sorghum cultivation is
 (a) Clay loam (b) Loam
 (c) Clay (d) All of these
271. The seed rate of sorghum is
 (a) 8-10kg/ha (b) 10-12 kg/ha
 (c) 15-18 kg/ha (d) 20-25 kg/ha
272. Optimum temperature for growth of sorghum ranges
 (a) 21-370C (b) 26-300C
 (c) 20-250C (d) None of these
273. Hybrid sorghum more suitable under mixed cropping is
 (a) CSH1 (b) CSH 2
 (c) CSH 6 (d) CSH 7
281. Highly tolerant variety of sorghum for striga is
 (a) SPV-104 (b) SPV922
 (c) SAR-2 (d) CSH-5
282. Test weight of sorghum is
 (a) 20-25g (b) 25-30 g
 (c) 30-35 g (d) 70-72 g
283. Soil sickness is caused by
 (a) Maize (b) Jowar
 (c) Linseed (d) Both b&c
284. The crop which known as a King of course cereals is
 (a) Bajra (b) Sorghum
 (c) Maize (d) Rice
285. Sorghum variety suitable both grain and fodder is
 (a) CSV15 (b) CSH 13
 (c) Both a & b (d) None of these

286. Critical stage of sorghum which reduces the yield due to drought is

- (a) Flowering (b) Grain filling
(c) Seedling (d) Both a&b

287. weedicide used in sorghum cultivation is

- (a) Pendimethalin (b) 2,4,D
(c) Atrazine (d) All

288. The right time of harvest sorghum is

- (a) 150-160days (b) 180-190 days
(c) 100-115 days (d) 60-80 days

289. Which among the following is a variety of sweet sorghum

- (a) CSV 15 (b) CSH 13
(c) SPV 462 (d) RSVV 46

290. Higher yield of sorghum could be achieve by

- (a) Use of higher dose of phosphate
(b) Adequate amount of N
(c) No nitrogen application
(d) Closer planting

291. The inflorescence in sorghum is

- (a) Siliqua (b) Head
(c) Ear (d) Spikelet

292. The sowing depth of sorghum is

- (a) 1-2cm (b) 3-4 cm
(c) 4-5 cm (d) 4-5 cm

293. The protein content of sorghum

- (a) 25-30% (b) 15-20%
(c) 10-12% (d) None

294. In sorghum, dead heart with more side tillers is characteristic symptom of?

- (a) Shoot fly (b) Sorghum midge
(c) Stem borer (d) Ear head bug

295. The holes at the base of te peduncle is due to?

- (a) Stem borer (b) Midge
(c) Shoot fly (d) Termites

296. Toxic limit of HCN in sorghum leaves

- (a) 100ppm (b) 200ppm
(c) 400ppm (d) 600ppm

297. All India coordinated sorghum Improvement Project started in

- (a) 1969 (b) 1965
(c) 1972 (d) 1980

298. Dual purpose sorghum variety is

- (a) CSV 1 (b) CSV 13
(c) CSH 1 (d) CSH 2

299. Sugar content of sweet sorghum

- (a) 6-7% (b) 8-10%
(c) 10-15% (d) 20-25%

CROP: PEARL MILLET (BAJRA)

300. The male sterile line in bajra was discovered by

- (a) GW Burton (b) NE Borlaug
(c) FW Gardener (d) None of these

301. The male sterile line was discovered in the year

- (a) 1950 (b) 1975
(c) 1985 (d) 1995

302. The first hybrid HB-1 was released in the year

- (a) 1965 (b) 1975
(c) 1985 (d) 1995

303. HB-1 bajra was developed by crossing

- (a) Tift 23A × J-104 (b) 5141 A × J-104
(c) 5054 A × J-104 (d) Tift 23A × Bil 38

304. The optimum pH for cultivation of barley is

- (a) 4-6 (b) 5-6.5
(c) 6-7 (d) 7-9

305. Test weight of bajra is

- (a) 15-20gm (b) 8-12 gm
(c) 20-25 gm (d) 12-15 gm

306. The recommended dose of NPK for hybrid bajra is

- (a) 60-40-40 (b) 100-60-40
(c) 30-20-30 (d) 40-30-40

307. The recommended dose of NPK for rainfed bajra is

- (a) 60-40-40 (b) 100-60-40
(c) 30-20-30 (d) 40-30-40

308. The optimum plant population per hectare of bajra is

- (a) 50,000 plants (b) 1,00,000 plants
(c) 1,50,000 plants (d) 2,00,000 plants

309. Maximum yield of bajra is obtained at a plant geometry of

- (a) 45 × 15 cm (b) 60 × 15 cm
(c) 45 × 25 cm (d) 60 × 20 cm

310. The best observed pH for bajra cultivation is

- (a) 5.0-5.5 (b) 6.0-7.5
(c) 7.5-8.5 (d) 8.5-9.5

311. Wherever one irrigation is available, the bajra crop should be irrigated at

- (a) Late booting to early flowering
(b) Tillering stage to early booting
(c) Flowering stage
(d) Milking stage

312. Pearl millet BK560-230 is a cross from

- (a) 5141A & J 104 (b) 5141A & D 230
(c) 5141A & 23 DB (d) 5141A & 23 D2 B

- 313. The male sterile line present in bajra hybrid HHB 45 is**
 (a) MS 5141A (b) MS 5054A
 (c) Tift 23A (d) MS 5071 A
- 314. The first inter-specific hybridization in bajra was carried out during the year**
 (a) 1941 (b) 1954
 (c) 1965 (d) 1975
- 315. In kera method of bajra sowing the seed is drilled**
 (a) By hand behind the plough in furrows
 (b) By funnel behind the plough in furrows.
 (c) By seed drill
 (d) All the above
- 316. In pora method of bajra sowing the seed is drilled by**
 (a) By hand behind the plough in furrows
 (b) By funnel behind the plough in furrows
 (c) By seed drill
 (d) All the above
- 317. The protein content in bajra is around**
 (a) 12% (b) 8%
 (c) 14% (d) 15%
- 318. The centre of origin of barley is**
 (a) Asia and Ethiopia (b) America
 (c) S Africa (d) None
- 319. In India the highest productivity of barley is in**
 (a) Punjab (b) UP
 (c) West Bengal (d) None
- 320. Area under barley cultivation in India is approximately**
 (a) 3.9 mha (b) 1.84 mha
 (c) 5.0 mha (d) 2.9 mha
- 321. Optimum temperature towards maturity of barley ranges from**
 (a) 21-37 °C (b) 28-30 °C
 (c) 20-25 °C (d) None
- 322. Which of the following management practises is more problematic in barley cultivation**
 (a) Fertilizer management
 (b) weed management
 (c) Water management
 (d) beushening
- 323. The optimum temperature for sowing of barley is**
 (a) 10-12°C (b) 15-20°C
 (c) 12-15°C (d) 25-30°C
- 324. Most suitable temperature for growth of barley is**
 (a) 32°C (b) 25°C
 (c) 37°C (d) 12-15°C
- 325. Barley crop at a spacing of 20 × 30cm will have a plant population of..... plants/ha**
 (a) 5,00,000 (b) 1,00,000
 (c) 1,25,000 (d) 2,50,000
- 326. The recommended seed rate for barley is Kg/ha**
 (a) 8-10 (b) 12-15
 (c) 15-18 (d) 75-90
- 327. The identified critical stage for irrigation in barley is**
 (a) Tillering (b) Flag leaf stage
 (c) Both of these (d) Maturity
- 328. Which one is the most critical stage for irrigation in barley**
 (a) Tillering (b) CRI
 (c) Jointing (d) Flowering
- 329. In two row barley spikelet is fertile**
 (a) Central (b) Left
 (c) Right (d) All
- 330. In six row barley spikelet is fertile**
 (a) Central (b) Left
 (c) Right (d) All
- 331. Barley crop needs**
 (a) Warm and humid climate
 (b) Hot and humid climate
 (c) Dry and hot conditions
 (d) Cold and dry climate
- 332. Photoperiodically barley is a type of plant**
 (a) Long day (b) Short day
 (c) Day neutral (d) Intermediate
- 333. The seed rate of barley in broadcasting and drilling is**
 (a) 100,60 kg/ha (b) 60,100 kg/ha
 (c) 45, 100 kg/ha (d) 100,45 kg/ha
- 334. The normal seed rate of barley is Kg/ha**
 (a) 50 kg/ha (b) 75 kg/ha
 (c) 100 kg/ha (d) 125 kg/ha
- 335. First irrigation to the barley crop should be given at**
 (a) CRI stage (b) Tillering stage
 (c) Jointing stage (d) Dough stage
- 336. Which of the following temp is ideal for tillering in barley**
 (a) 10-15°C (b) 16-20°C
 (c) 20-23°C (d) 23-25°C
- 337. The depth of sowing of barley is**
 (a) 1-2cm (b) 3-5cm
 (c) 6-8cm (d) 5-6cm

338.is a variety of barley suitable for chapatti making
 (a) Amber (b) RD 137
 (c) Neelam (d) Rajkiran
339.is a nematode resistant variety of barley
 (a) Amber (b) RD 137
 (c) Neelam (d) Rajkiran
340. is a six row variety of barley
 (a) Amber (b) RD 137
 (c) Neelam (d) Rajkiran
341. Leaf of barley is
 (a) Sessile (b) Petiolate
 (c) Both (d) None of these
342. Spike of barley is borne on
 (a) Uppermost node (b) Lower most node
 (c) Middle nodes (d) None of these
343. Ratna variety of barley tolerant to saline alkaline conditions is released from
 (a) Phillipines (b) Taiwan
 (c) Malaysia (d) IARI
344. Is a salt tolerant variety of barley
 (a) Amber (b) RD 137
 (c) Neelam (d) Rajkiran
345. Is a variety of barley suitable for malting
 (a) Amber (b) RD 137
 (c) Neelam (d) Rajkiran
346. Which among the millets has rich source of Ca
 (a) Finger millet (b) Kodo millet
 (c) Foxtail millet (d) Branyard millet
347. The coarsest millet is
 (a) Panicum milacium
 (b) Paspalum scrobiculatum
 (c) Setaria italica
 (d) Echinocloa frumentaceae
348. Highest productivity among the millets is
 (a) small millet (b) Kodo millet
 (c) finger millet (d) little millet
349. AICRP on small millets
 (a) Banglore (b) Hydrabad
 (c) Nagpur (d) Mao
351. About _____ % of global chickpea area falls in India
 (a) 60% (b) 75%
 (c) 90% (d) 37%.
352. Cicer word derived from
 (a) Latin (b) Dutch
 (c) France (d) Greek.
353. Protein content of chickpea is
 (a) 17-21% (b) 23%
 (c) 25-26% (d) 31%.
354. Largest producer of chickpea is
 (a) Madhya Pradesh (b) Maharashtra
 (c) Andhra Pradesh (d) Karnataka
355. Origin of chickpea is
 (a) Mediterranean region of Europe & West Asia
 (b) South West Asia
 (c) Ethiopia
 (d) South Mexico & Central America
356. All India Co-ordinated Pulses Improvement Project was started in the year
 (a) 1962 (b) 1975
 (c) 1967 (d) 1986.
357. Avrodhi variety of chickpea is resistant to
 (a) Wilt (b) Aschochyta blight
 (c) collar rot (d) stem rot.
358. Gaurav is resistant to
 (a) Dry root rot (b) Aschochyta blight
 (c) Wilt (d) Stem rot
359. Rhizobium strain effective to chickpea is
 (a) Rhizobium leguminosorum
 (b) R. Japonicum
 (c) Both of them
 (d) None of them.
360. Which acid is responsible for the sour taste of chickpea leaves
 (a) Malic acid (b) Oxalic acid
 (c) Citric acid (d) All of them.
361. Desi type of the chickpea contain high amount of the pigment
 (a) Xanthophyll (b) Anthocyanin
 (c) Carotene (d) All of them.
362. Key pest of chickpea is
 (a) Aphid (b) Termites
 (c) Gram pod borer (d) Semilooper.
363. Malic acid content of chickpea is
 (a) 90-96% (b) 4-9%
 (c) 70-80% (d) 87%.

PULSES

CROP: CHICKPEA

350. Percent share of chickpea in total production of India
 (a) 30-40% (b) 15-16%
 (c) 40-50% (d) 10-12%.

- 364. Seed rate of kabuli type of chickpea is**
 (a) 40-50 kg/ha (b) 120-150 kg ha
 (c) 80-100 kg/ha (d) 60-75 kg ha
- 365. Wilt & drought resistant variety of chickpea is**
 (a) Vishal (b) JJ-11
 (c) Annigere (d) ICCV-10.
- 366. Delayed sowing in chickpea leads to**
 (a) Restriction of Vegetative growth
 (b) Decrease in BNF
 (c) Incidence of Gram pod borer
 (d) All of them.
- 367. Nipping is done at**
 (a) 20-25 DAS
 (b) 30-40 DAS
 (c) Exactly 3 weeks after sowing
 (d) After flowering.
- 368. Acids obtained from chickpea is used for curing**
 (a) Chicken pox (b) Allergy
 (c) Indigestion (d) None of them.
- 369. Spacing for desi type of chickpea is**
 (a) 30x10 (b) 25x20
 (c) 45x10 (d) 30x20.
- 370. Largest producer of chickpea is**
 (a) Brazil (b) India
 (c) China (d) Africa
- 371. Amount of losses caused by weeds in chickpea is**
 (a) 28.7% (b) 30-40%
 (c) 38% (d) 49.5%.
- 372. Seed weight of kabuli chickpea is**
 (a) 17-26g (b) 26g
 (c) >26g (d) none of them.
- 373. Besan is produced from**
 (a) Mung bean (b) Gram
 (c) Lentil (d) Red gram.
- 374. Which state has highest average yield/ha of Gram**
 (a) Madhya Pradesh (b) Maharashtra
 (c) Andhra Pradesh (d) Uttar Pradesh.
- 375. Root system of gram is**
 (a) Fibrous root (b) Tap root
 (c) both of them (d) None of them.
- 376. Pollination type of gram is**
 (a) self pollinated (b) open pollinated
 (c) cross pollinated (d) None of them.
- 377. Deep sowing of gram is protection of**
 (a) Wilt (b) Blight
 (c) Root rot (d) Collar rot.
- 378. Best variety of chickpea for dryland is**
 (a) Chaffa (b) C-235
 (c) Vishal (d) JJ-11.
- 379. Chaffa is a variety of**
 (a) Pigeon pea (b) Pea
 (c) Gram (d) Lentil.
- 380. Optimum sowing time of gram is**
 (a) 15 Oct. to 20 Oct (b) End of Nov
 (c) Sept.-Oct (d) August-Sept. C
- 381. Seed bed for gram should be**
 (a) Rough (b) Fine
 (c) Well drained (d) Ridge bed
- 382. Gram is a**
 (a) summer crop (b) Kharif crop
 (c) Rabi crop (d) None of them

CROP: PIGEON PEA

- 383. Botanical name of Arhar is**
 (a) *Cajanas cajan var. flavus*
 (b) *C. cajan var. bicolor*
 (c) *Cajanas cajan*
 (d) None of them
- 384. Origin of Arhar is**
 (a) Africa (b) Brazil
 (c) India (d) Turkey
- 385. Temperature for germination is**
 (a) 30-35OC (b) 20-25OC
 (c) 17-21oC (d) above 35OC
- 386. Temperature for growth is**
 (a) 17-21OC (b) 20-25OC
 (c) 10-15oC (d) None of them
- 387. Sowing time of Arhar is**
 (a) 15th June (b) April-May
 (c) End of July (d) None of them
- 388. Spacing for short duration Arhar is**
 (a) 45x20 (b) 45x30
 (c) 60x15 (d) 90x 30
- 389. Seed rate for Arhar is**
 (a) 8-10kg/ha (b) 12-15kg/ha
 (c) 20-25kg/ha (d) 18-20kg/ha
- 390. Proportion of seeds to pods is**
 (a) 50-60% (b) 30-40%
 (c) 70% (d) 65-70%
- 391. Highest production in the state**
 (a) Uttar Pradesh (b) Karnataka
 (c) Madhya Pradesh (d) Maharashtra

- 392. Harvest index of Arhar is**
 (a) 10% (b) 25%
 (c) 19% (d) 16%
- 393. Hybrid variety released by ICRISAT**
 (a) ICPH-8 (b) ICPL-151
 (c) Birsa Arhar 1 (d) T-17
- 394. Protein content of pigeon pea is**
 (a) 23% (b) 26.1%
 (c) 19% (d) 21.7%
- 395. Earliest variety**
 (a) UPAS-120 (b) Mukta
 (c) Birsa Arhar 1 (d) ICPL-8863.
- 396. Wilt of pigeon pea is caused by**
 (a) *Fusarium oxysporum* f.sp. *udum*
 (b) *F. oxysporum*
 (c) *F. oxysporum* f.sp. *oxysporum*
 (d) All of them.
- 397. Pigeon pea is**
 (a) Open pollinated (b) Cross pollinated
 (c) Self pollinated (d) None of them
- 398. In most of the cases, ratio of pigeon pea & intercrops are maintained as**
 (a) 1:1 (b) 2:2
 (c) 3:1 (d) 2:1
- 399. Rabi Arhar is practiced in**
 (a) Dryland (b) Hilly areas
 (c) Flood prone areas (d) All of them.
- 400. Sowing time of rabi pigeon pea is**
 (a) July-August (b) Last of Oct
 (c) Nov.-Dec (d) last 2 weeks of Sept
- 401. Percent share of pigeon pea in total production of India**
 (a) 40-50% (b) 15-16%
 (c) 10-12% (d) 20-25%
- 402. States which leads in both area & production**
 (a) Madhya Pradesh (b) Maharashtra
 (c) Karnataka (d) Andhra Pradesh.
- 403. Germination type of pigeon pea**
 (a) Hypogeal (b) Epigeal
 (c) Precocious (d) Phanerocotylor.
- 404. Seed rate of long duration Arhar**
 (a) 8-10kg/ha (b) 12-15kg/ha
 (c) 20-25kg/ha (d) 18-20kg/ha
- 405. Sterility mosaic of Arhar is transmitted by**
 (a) Aphid (b) Leaf hopper
 (c) Mite (d) Thrips.
- 406. Optimum moisture content of pigeon pea seed for storage is**
 (a) 8% (b) 10-12%
 (c) 12-15% (d) 8-10%
- 407. Sterility mosaic resistant variety of Arhar is**
 (a) ICPL-8863 (b) Pusa Ageti
 (c) Birsa Arhar 1 (d) Bahar
- 408. Rains during flowering of pigeon pea results in**
 (a) Poor pollination
 (b) Infection of pod borer
 (c) Both of them
 (d) None of them.
- 409. Seed weight of pigeon pea is**
 (a) 75mg (b) 150mg
 (c) 100mg (d) 80mg.
- 410. Germination of pigeon pea is**
 (a) Hypogeal (b) Epigeal
 (c) Epi-hypogeal (d) Both 1st & 3rd
- 411. Global pigeon pea area falls in India**
 (a) 90% (b) 75%
 (c) 60% (d) 38%
- 412. India ranks _____ in pigeon pea production**
 (a) 1st (b) 2nd
 (c) 4th (d) 5th
- 413. Percent losses caused by weeds in pigeon pea is**
 (a) 34.5% (b) 42%
 (c) 28.7% (d) 49.5%.
- 414. In rice-wheat cropping system which pulse crop can be used to improve soil fertility**
 (a) Cowpea (b) Pigeon pea
 (c) Gram (d) Pea

CROP: LENTIL

- 415. The centre of origin of lentil is**
 (a) Mediterranean region (b) South Africa
 (c) South East Asia (d) Brazil
- 416. The inflorescence in lentil is**
 (a) Raceme (b) Spikelets
 (c) Panicle (d) Ear
- 417. Optimum temperature for growth of lentil ranges between**
 (a) 21-37OC (b) 20-25OC
 (c) 18-20OC (d) None of these
- 418. The optimum seed rate for normal sown crop lentil is**
 (a) 8-10 Kg/ha (b) 15-18 Kg/ha
 (c) 75-100 Kg/ha (d) 30-40 Kg/ha

- 419. The leading producer of lentil is**
 (a) Burma (b) Banglades
 (c) India (d) Ceylon
- 420. Whole Lentil is commonly known as**
 (a) Masoor (b) channa
 (c) Matar (d) Malka masoor
- 421. Whenever one irrigation is available, the lentil crop should be irrigated at**
 (a) Grain filling stage
 (b) Pre flowering stage
 (c) Tillering stage
 (d) Milking stage
- 422. The row to row spacing by pora method of sowing of lentil is**
 (a) 50 cm (b) 20 cm
 (c) 30 cm (d) 10 cm
- 423. Small seeded lentil belongs to sub species**
 (a) Culinaris (b) Macrosperma
 (c) Microsperma (d) None of these
- 424. Lentil belongs to family**
 (a) Liliaceae (b) Tiliaceae
 (c) Linaceae (d) Leguminoceae
- 425. Number of chromosome in Lentil**
 (a) $2n=14$ (b) $2n=16$
 (c) $2n=24$ (d) $2n=20$
- 426. Protein content in lentil is**
 (a) 20% (b) 15%
 (c) 25% (d) 33%
- 427. Lentil crop cultivation is best suited under**
 (a) Warm and humid climate
 (b) Dry and hot climate
 (c) Hot and humid climate
 (d) Cool and dry climate
- 428. Which one of the following is the variety of lentil**
 (a) Basanti (b) Arkel
 (c) Malika (d) Awarodhi
- 429. The insect pod borer is commonly found on**
 (a) Wheat (b) Maize
 (c) Lentil (d) Groundnut
- 430. Which among the crop is having the highest protein content?**
 (a) Gram (b) Green gram
 (c) Lentil (d) Black gram
- 431. Lentil is generally intercropped with**
 (a) Barley (b) Sugarcane
 (c) Mustard (d) All of these

CROP: LATHYRUS

- 432. The centre of origin of lathyrus is**
 (a) Europe (b) South Africa
 (c) America (d) None of these
- 433. The optimum seed rate for normal sown crop lathyrus is**
 (a) 20-25 Kg/ha (b) 40-60 Kg/ha
 (c) 75-80 Kg/ha (d) 30-35 Kg/ha
- 434. The inflorescence in Grass pea is**
 (a) Raceme (b) Spikelets
 (c) Panicle (d) Ear
- 435. The toxic substance present in lathyrus is**
 (a) Lathogen (b) BOAA
 (c) Neurotoxin (d) All the above
- 436. Protein content in chickling pea is**
 (a) 27.5% (b) 25%
 (c) 31.9% (d) 33%
- 437. Which of the following neurotoxin is found in Lathyrus crop**
 (a) Glutamate (b) Botulinum toxin
 (c) BOAA (d) Both b & c
- 438. Which of the variety of lathyrus contains least BOAA neurotoxin**
 (a) BR-1 (b) BIO L-212
 (c) LSD-1 (d) LSD-6

CROP: PEAS

- 439. The centre of origin of Pea is**
 (a) Mediterranean region (b) South Africa
 (c) South East Asia (d) Brazil
- 440. The inflorescence of pea is**
 (a) Axillary raceme (b) Spikelets
 (c) Panicle (d) Ear
- 441. Maximum area under cultivation of pea in India is in**
 (a) M. P. (b) Maharashtra
 (c) U. P. (d) Bihar
- 442. Optimum temperature towards flowering and fruiting of pea ranges between**
 (a) 21-37 °C (b) 20-25 °C
 (c) 25-30 °C (d) None of these
- 443. Higher yield of pea could be achieved by-**
 (a) Use of higher dose of phosphate
 (b) Adequate amount of nitrogen
 (c) Closer planting
 (d) All the above

444. Pea is commonly known as
 (a) Arhar (b) Matar
 (c) Channa (d) Khesari
445. What is the ideal temperature for germination of pea
 (a) 22 OC to 25 OC (b) 10 OC to 15 OC
 (c) 15 OC to 20 OC (d) 25 OC to 30 OC
446. Wherever one irrigation is available, the pea crop should be irrigated at _____ stage
 (a) Pod formation (b) Pre flowering
 (c) Branching (d) Grain filling
447. Pea crop cultivation is best suited under
 (a) Warm and humid climate
 (b) Dry and hot climate
 (c) Hot and humid climate
 (d) Cool and dry climate
448. The recommended dose of N, P₂O₅ & K₂O kg/ha for garden pea are
 (a) 60:40:40 (b) 20:60:40
 (c) 120:40:40 (d) 40:30:40
449. Grain colour of field pea
 (a) White colour (b) Brownish red colour
 (c) Yellow colour (d) All of these
450. How much seed of pea should be treated with one packet of Rhizobium culture
 (a) 5 kg (b) 15 kg
 (c) 10 kg (d) 20 kg
451. Arkel & Asauji are the varieties of
 (a) Pisum sativum var hortens
 (b) Pissum sativum var gardens
 (c) Pisum sativum var arvense
 (d) None of the above
452. Rachna & Harbhajan are the varieties of
 (a) Pisum sativum var hortens
 (b) Pissum sativum var gardens
 (c) Pisum sativum var arvense
 (d) None of the above
453. Pea should be treated with rhizobium inoculation of
 (a) R. japonicum (b) R. leguminosarum
 (c) R. glycine (d) None of the above
454. Wilt disease of pea is caused by
 (a) Fusarium oxysporum (b) Erysiphe polygoni
 (c) Rhizoctonia solani (d) Uromyces fabae
455. Optimum pH range required for better growth of peas is
 (a) 4.5-5.5 (b) 5.5-6.5
 (c) 6.5-7.5 (d) None of these
456. Peas variety suitable for normal and late planting with wilt and rust resistance is
 (a) Pant L 406 (b) Pant Marter 5
 (c) Shivalik (d) Rachna
457. Pea variety suitable for growing under irrigated and rainfed condition and having wilt resistance is
 (a) Pant L 406 (b) Pant Marter 5
 (c) Shivalik (d) Rachna
458. The first dwarf variety of pea released was
 (a) Shivalik (b) Awarodhi
 (c) Arpana (d) Avrodhi

OTHER PULSES

459. *Lablab purpureus* belongs to
 (a) Fabaceae (b) Graminae
 (c) Mimosasea (d) Poaceae
460. Fruit of Hyacinth bean is not taken as raw because it contains.....
 (a) Cyanogenic glucosides
 (b) Coumarine
 (c) Anisatin
 (d) Pyrrolizidine alkaloid
461. Crude protein content in Hyacinth bean is
 (a) 14.8% (b) 18%
 (c) 22% (d) 16.5%
462. Nodulation and plant growth of hyacinth bean is inhibited in
 (a) July & December
 (b) December & July
 (c) July only
 (d) December only
463. Anthracnose in hyacinth bean is caused by
 (a) Colletotrichum lindemuthianum and Colletotrichum capsici
 (b) *Colletotrichum lindemuthianum*
 (c) *Colletotrichum capsici*
 (d) *Colletotrichum falcatum*
464. Jack bean cannot be used in fodder mixtures containing urea as it contains enzyme
 (a) Urease (b) Protease
 (c) Nitrogenase (d) Denitrogenase

CROP: COWPEA

465. Critical stages of irrigation in cowpea.....
 (a) Flowering & pod formation
 (b) Flowering
 (c) Seedling
 (d) None of these

466. Which is not a fodder variety of cowpea?
 (a) Sirsa-10 (b) Azad-1
 (c) Russian Gaint (d) K-585
467. Application of Phosphorus and Sulphur increase
 (a) Better nodulation (b) Better growth
 (c) Better yield (d) All
468. IW: CPE ratio...
 (a) 0.8 – 1 (b) 0.5
 (c) 0.6 (d) None

CROP: HORSEGRAM AND SOY BEAN

469. Area & production of Horse gram in India is highest in
 (a) Karnataka (b) Odisha
 (c) Maharashtra (d) M.P
470. Herbicides are less use in Horse gram cultivation...
 (a) Crop is remunerative
 (b) Crop is less remunerative
 (c) Sturdy crop
 (d) None of these
471. Seed of Horse gram contains.....inhibitor
 (a) Trypsin (b) Polyphenols
 (c) Haemagglutinins (d) All the above
472. Soybean is called a wonder crop because it is:
 (a) An excellent protein source
 (b) An excellent oilseed crop
 (c) High yield potential
 (d) Both a and b
473. Family of soybean :
 (a) Leguminosae (b) Apilionceaceae
 (c) Compositae (d) Linaceae
474. The major amino acid present in soybean is:
 (a) Cysteine (b) lycine
 (c) Arginine (d) Hystine
475. The crop which is good for diabetic patient:
 (a) Green gram (b) Groundnut
 (c) soybean (d) cowpea
476. Soybean is originated in:
 (a) India (b) china
 (c) USA (d) Japan
477. Which crop is called poor man meat?
 (a) Green gram
 (b) Black gram
 (c) Pegion pea
 (d) soybean
478. Soybean seeds contain:
 (a) 20%oil and 20%protein
 (b) 40%oil and 40% protein
 (c) 40% oil and 20%protein
 (d) 20%oil and 40%protein
479. The optimum time for *kharif* soybean planting is:
 (a) First fortnight of June
 (b) First fortnight of July
 (c) Second fortnight of June
 (d) Second fortnight of July
480. The optimum temperature for the germination of soybean is:
 (a) 11 °C (b) 20 °C
 (c) 15 °C (d) 22 °C
481. The optimum seed rate of soybean for normal planting is
 (a) 50-60 kg/ha (b) 60-70kg/ha
 (c) 70-80kg/ha (d) 80-90kg/ha
482. The grain legume which is also grown as an oilseed crop is
 (a) Chickpea (b) Urd bean
 (c) Soybean (d) Lentil
483. When was soybean first introduced in the USA
 (a) 1808 (b) 1904
 (c) 1804 (d) 1908
484. When was soybean first introduced in India:
 (a) 1880 (b) 1890
 (c) 1980 (d) 1990
485. For spring soybean, seed should be.....than that of *kharif* planting
 (a) More (b) Less
 (c) Similar (d) Double
486. The usually recommended plant to plant distance for soybean is:
 (a) 2-3cm (b) 4-5cm
 (c) 5-7cm (d) 8-10cm
487. The soybean can be incorporated with:
 (a) Wheat
 (b) Chickpea
 (c) Maize
 (d) Tobacco
488. The pH range for suitable for soybean cultivation is:
 (a) 5.0-6.0
 (b) 7.0-8.5
 (c) 5.5-6.5
 (d) 6.0-7.5

489.is considered to be a progenitor of soybean:
- Glycine max
 - Glycine sinensis
 - Glycine ussuriensis
 - Glycine ussuriensis
490. Ankur is a variety of :
- Soybean
 - Groundnut
 - Blackgram
 - Sesamum
491. Most critical stage for N requirement of soybean is
- Bud initiation
 - Pre-flowering
 - Between a and b
 - Pod maturity
492. Which of the fertilizer is best suited for soybean
- Single super phosphate
 - Potassium sulphate
 - Ammonium sulphate
 - All
493. Optimum depth of sowing soybean seed is
- 3-5cm
 - 5-8cm
 - Less than 3cm
 - More than 10 cm
494. Ideal population of high soybean yield is
- 2 lakhs/ha
 - 3 lakhs/ha
 - 4 lakhs/ha
 - 5 lakhs/ha
495. Most critical stage for irrigation of soybean crop is:
- Pod development
 - Seed filling
 - Pod maturation
 - Between a and b
496. Herbicide generally practiced as pre plant application in soybean is
- Trifluralin
 - Nitralin
 - Vernolate
 - All of these
497. Weedicide use as pre-emergence for controlling weeds in soybean is
- Chloramben
 - Linuron
 - Fluorodifen
 - All of these
498. Post emergence herbicides generally used in soybean crop is
- 2,4 – D
 - Chloroxuron
 - Dinoseb
 - All of these
499. Soybean variety suitable for kharif season is:
- Bragg
 - Lee
 - Durga and gaurav
 - All of these
500. Soybean variety suitable for spring is
- Merit
 - Clark 63
 - Ankur
 - All of these
501. Which of the crop gives the highest protein equal to egg, milk and meat
- Black garm
 - Lentil
 - Soybean
 - Pegion pea
502. World's leading acreage and production of soybean lies in:
- USA
 - India
 - China
 - Pakistan
503. Which of the Indian state is called soya state
- Uttar pradseh
 - Madhya Pradesh
 - Andhra Pradesh
 - Gujarat
504. Soybean contains which of the following polyunsaturated fatty acid
- Linolic acid
 - Oleic acid
 - Both a and b
 - None of these
505. Best suited irrigation system of soybean
- Check basin
 - Border strip
 - Both a and b
 - None of these
506. Soybean isto both acidic and alkaline condition
- Sensitive
 - Slightly Tolerant
 - Tolerant
 - None of these
507. Yellow mosaic resistant variety of soybean is
- Bragg
 - Ankur
 - Shilajit
 - All of these
508. Black seeded soybean varieties are
- Rich in protein but low in oil content
 - Rich in oil but low in protein content
 - Both high protein and oil content
 - Both low protein and oil content
509. Yellow seeded soybean varieties are
- Rich in protein but low in oil content
 - Rich in oil but low in protein content
 - Both high protein and oil content
 - Both low protein and oil content
510. Soybean yellow mosaic is transmitted by
- Plant hopper
 - White fly
 - Aphids
 - None of these
511. All India Coordinated Research Project on soybean was stated during
- 1967
 - 1964
 - 1984
 - 1990

OILSEED CROPS

- 512. Oldest Oilseed crop in India is:**
 (a) Sunflower (b) Rape seed and Mustard
 (c) Groundnut (d) Sesame
- 513. The fruit of rapeseed and mustard is known as**
 (a) Pod (b) Grain
 (c) Siliqua (d) Caryopsis
- 514. The highest production of mustard in India is in**
 (a) Gujarat (b) U.P.
 (c) Punjab (d) Rajasthan
- 515. The seed rate for sesamum is**
 (a) 2-3 kg (b) 3-4 kg
 (c) 4-5 kg (d) 5-6 kg
- 516. The oil and protein content of groundnut are**
 (a) 20% & 50% (b) 26% & 45%
 (c) 45% & 26% (d) 50% & 26%
- 517. Which is the leading state in production of Groundnut ?**
 (a) U.P. (b) Rajasthan
 (c) Haryana (d) Gujarat
- 518. Sunflower act as an indicator plant to diagnose the deficiency of**
 (a) Boron (b) Iron
 (c) Nitrogen (d) Phosphorus
- 519. Vegetable oil is obtained in India from _____ number of cultivated oilseed crops**
 (a) 3 (b) 5
 (c) 7 (d) 9
- 520. Most important oilseed crops contributing > 75% of oilseed production in India is**
 (a) Groundnut and mustard
 (b) Groundnut and castor
 (c) Mustard and sesame
 (d) Castor and sunflower
- 521. Among the nine vegetable oilseed crops, which is non edible oil?**
 (a) Linseed (b) Castor
 (c) Both a and b (d) None of these
- 522. High temperature during which stage of Soybean increases oil content:**
 (a) Pre-flowering (b) Seed formation
 (c) Flowering (d) Maturing
- 523. Drought situations during which stage of Soybean causes Flower and Pod dropping:**
 (a) Pre-flowering
 (b) Flowering
 (c) Seed formation
 (d) Maturing
- 524. Most critical stage for N requirement of soybean is**
 (a) Bud initiation (b) Pre-flowering
 (c) Between a and b (d) Pod maturity
- 525. Which of the following is best suited fertilizer for soybean?**
 (a) Single super phosphate
 (b) Potassium sulphate
 (c) Ammonium sulphate
 (d) All of these
- 526. Optimum depth of soybean seed sowing is**
 (a) 3-5 cm (b) 5-8 cm
 (c) < 3 cm (d) > 10 cm
- 527. Seed rate for soybean crop is**
 (a) 5-10 kg/ha (b) 10-20 kg/ha
 (c) 20-30 kg/ha (d) 40-50 kg/ha
- 528. Ideal population for high soybean yield is**
 (a) 2 lakhs/ha (b) 4 lakhs/ha
 (c) 3 lakhs/ha (d) 5 lakhs/ha
- 529. Most critical stage for irrigation of soybean crop is**
 (a) Pod development (b) Seed filling
 (c) Between a and b (d) Pod maturation
- 530. Herbicides generally practice as pre plant application in soybean is**
 (a) Trifluralin (b) Nitratin
 (c) Vernolate (d) All of these
- 531. Weedicide used as pre-emergence for controlling weeds in soybean is**
 (a) Chloramben (b) Linuron
 (c) Fluorodifen (d) All of these
- 532. Post emergence herbicides generally used in soybean crop is**
 (a) 2,4-DB (b) Chloroxuron
 (c) Dinoseb (d) All of these
- 533. Which variety of soybean is suitable for cultivation during kharif season?**
 (a) Bragg (b) Lee
 (c) Durga and gaurav (d) All of these
- 534. Soybean variety suitable for spring season is**
 (a) Merit (b) Clark 63
 (c) Ankur (d) All of these
- 535. Protein and oil content of soybean is**
 (a) 43% & 20% (b) 35% & 30%
 (c) 30% & 35% (d) 20% & 43 %
- 536. Which of the crop gives the highest protein equal to egg, milk and meat?**
 (a) Black gram
 (b) Soybean
 (c) Pigeon pea
 (d) Lentil

537. **World's leading acreage and production of soybean lies in**
 (a) USA (b) India
 (c) China (d) Pakistan
538. **Which of the Indian state is popularly called as soya state?**
 (a) Uttar Pradesh (b) Madhya Pradesh
 (c) Andhra Pradesh (d) Gujarat
539. **Soybean contains which of the following polyunsaturated fatty acid?**
 (a) Linolic acid (b) Oleic acid
 (c) Both a and b (d) None of these
540. **Groundnut production is highest in**
 (a) India (b) China
 (c) USA (d) Pakistan
541. **Mean temperature required for groundnut cultivation is**
 (a) 21-26.5 °C (b) 25-30 °C
 (c) 30-35 °C (d) 15-20 °C
542. **Best suited soil for groundnut cultivation is**
 (a) Sandy (b) Sandy loam
 (c) Both a and b (d) Clay loam
543. **Optimum pH range for groundnut cultivation is**
 (a) 4.0-5.0 (b) 6.0-6.5
 (c) 5.0-6.5 (d) 7.5-9.0
544. **Which of the following is bunchy type of groundnut variety?**
 (a) Jyoti
 (b) Moongphali Haryana 1
 (c) Kopergaon No.3
 (d) Both b and c
545. **Groundnut variety preferred for table purpose is**
 (a) Jyoti (b) TMV 6
 (c) Kopergaon No.3 (d) Both b and c
546. **Optimum seed rate required for bunchy type groundnut cultivation is**
 (a) 20-40 kg/ha (b) 40-60 kg/ha
 (c) 60-80 kg/ha (d) 100-150 kg/ha
547. **Groundnut seeds are sown at a depth of**
 (a) 5-8 cm (b) 10-12 cm
 (c) 15-18 cm (d) 1-2 cm
548. **Gypsum application required for development of better pods of groundnut is**
 (a) 200 kg/ha
 (b) 500kg/ha
 (c) 800 kg/ha
 (d) 1000 kg/ha
549. **Herbicide suitable for controlling weeds of groundnut field is**
 (a) Fluchloralin
 (b) Nitrofen
 (c) Pendimethalin
 (d) All of these
550. **Growth regulator (NAA) applied during flowering stage will influence**
 (a) Pod formation (b) Pod development
 (c) Both a and b (d) Maturity
551. **Groundnut is sensitive to**
 (a) Poor drainage
 (b) Higher acidity and alkalinity
 (c) Cold weather
 (d) All of these
552. **Groundnut can be grown as intercrop in**
 (a) Bajra (b) Sunflower
 (c) Cotton (d) All of these
553. **Normal groundnut yield under well managed and irrigated condition is**
 (a) 1.0-1.5 t/ha (b) 3.0-3.5 t/ha
 (c) 1.5-2.0 t/ha (d) 4.0-4.5 t/ha
554. **Groundnut variety which is having drought resistant is**
 (a) TMV 2 (b) TMV3
 (c) TMV 4 (d) All of these
555. ***Aspergillus flavus* fungi colonization resistant groundnut variety is**
 (a) J 11 (b) Faizpur
 (c) AG 7223 (d) All of these
556. **Groundnut oilcake can be used as**
 (a) Manure
 (b) Poultry feed ingredient
 (c) Manufacturing artificial fibers
 (d) All of these
557. **Which of the element requires more quantity for groundnut?**
 (a) P (b) S
 (c) Ca (d) All of these
558. **Oil content of Sunflower is:**
 (a) 10-20 % (b) 20-35%
 (c) 35-43% (d) 45-50%
559. **Which is the short duration Sunflower variety?**
 (a) Morden (b) DSH-1
 (c) Jwalamukhi (d) Sungene
560. **Herbicide used to control the weeds in sunflower us:**
 (a) Alachor (b) Pendimethalin

- (c) Fluchloralin (d) All of these
- 561. Sunflower is widely cultivated in India, because of:**
 (a) Short duration
 (b) Photosensitivity
 (c) Wide adaptability and drought tolerance
 (d) All of these
- 562. Critical stage for irrigation in Sunflower is:**
 (a) Flowering (b) Grain filling
 (c) Both a and b (d) Vegetative
- 563. Sunflower is having problem in cultivation in India, because of:**
 (a) More bird's damage
 (b) Poor seed filling
 (c) Oil becomes bitter within 90 days of harvest
 (d) All of these
- 564. Sesame cannot withstand:**
 (a) Frost (b) Continuous rain
 (c) Prolonged drought (d) All of these
- 565. Which of the stage of Sesame is sensitive to water stress?**
 (a) Flowering (b) Grain filling
 (c) Both a and b (d) Seeding
- 566. Optimum temperature required for better growth of Sesame is:**
 (a) 20-25°C (b) 25-27°C
 (c) 27-35°C (d) 35-40°C
- 567. Which of the following is a White seeded Variety of Sesame:**
 (a) Kanki White (b) Haryana Til 1
 (c) Tapti (d) All of these
- 568. Oilseeds Production Programme (OPP) was started during:**
 (a) 1990-1991 (b) 1989-1990
 (c) 1993-1994 (d) 1986-1987
- 569. Optimum plant population for better production of Sunflower is**
 (a) 10,000 plants/ha
 (b) 40000 plants/ha
 (c) 60000 plants/ha
 (d) 100000 plants/ha
- 570. Which Oil is called the "Poor man's GHEE"**
 (a) Groundnut (b) Sunflower
 (c) Sesame (d) Linseed
- 571. What percentage of Unsaturated fatty acids such as Oleic and Linoleic acid contribute to the total Sunflower oil:**
 (a) 95% (b) 90%
 (c) 80% (d) 85%
- 572. First Sunflower hybrid variety is:**
 (a) MSFH-8 (b) Surya
 (c) BSH-1 (d) Morden
- 573. Sunflower variety resistant to Rust and Downey Mildew:**
 (a) KBSH-41 (b) BSH-1
 (c) DRSF113 (d) Morden
- 574. Parent of BSH-1**
 (a) CMS 435A x KBSH42
 (b) CMS234A x RHA274
 (c) Jwalamukhi x APSH 11
 (d) DRSF108 x KBSH1
- 575. All India Coordinated Project on Oilseeds was established during:**
 (a) 1960 (b) 1962
 (c) 1967 (d) 1969
- 576. Family of Sunflower:**
 (a) Fabaceae (b) Asteraceae
 (c) Pedaliaceae (d) Euphorbiaceae
- 577. Basic chromosome number of Sunflower is:**
 (a) 15 (b) 21
 (c) 9 (d) 17
- 578. Highest productivity of Sunflower is in:**
 (a) USA (b) Ukraine
 (c) Israel (d) Russia
- 579. High Phosphorus to Soybean reduce Zinc availability in:**
 (a) Alakali soil (b) Sodic soil
 (c) Acidic soil (d) All of these
- 580. The percentage of Linoleic acid in Sunflower Oil is:**
 (a) 60% (b) 62%
 (c) 40-67% (d) 66%
- 581. In Groundnut, embryo is killed when the soil temperature is beyond:**
 (a) 18 (b) 33
 (c) 54 (d) 70
- 582. Fertilizer responsible for increase of protein and glucosinolate content is:**
 (a) Phosphorus (b) Sulphur
 (c) Potassium (d) Nitrogen
- 583. Critical weed competition in Soybean is:**
 (a) 30-35 (b) 35-40
 (c) 40-45 (d) 45-50
- 584. Flower of Sunflower is called:**
 (a) Capsule (b) Siliqua
 (c) Achene (d) Capitula

- 585. Which stage of Soybean is ideal to harvest for fodder purpose?**
 (a) Flowering (b) Pod formation
 (c) Vegetative stage (d) Pre-flowering
- 586. Optimum moisture content for storing Mustard is:**
 (a) 8% (b) 12%
 (c) 20% (d) 18%
- 587. In South India, Sesame is grown in:**
 (a) Rabi only (b) Kharif only
 (c) Rabi and Kharif (d) Summer
- 588. Optimum temperature for storing Groundnut is:**
 (a) 5% (b) 8%
 (c) 12% (d) 15%
- 589. Deep ploughing of soil in a Groundnut field should normally be avoided because it:**
 (a) Makes harvesting difficult
 (b) Makes pegging difficult in upper layers
 (c) Delays germination
 (d) Delays pegging and pod development.
- 590. Fertilizer dose recommended for a crop of Groundnut is N:P:K, respectively**
 (a) 20-40: 50-60: 30-40 (b) 40-50: 50-60: 30-40
 (c) 20-40 : 60-80: 30-50 (d) 40-50 : 60-80: 30-50
- 591. Bacteria responsible for Nitrogen fixation in Soybean is**
 (a) Rhizobium japonicum
 (b) Rhizobium phaseoli
 (c) Rhizobium leguminosarum
 (d) Rhizobium glycium
- 592. pH range suitable for Soybean cultivation is**
 (a) 5.0-6.0 (b) 7.0-8.5
 (c) 5.5-6.5 (d) 6.0-7.5
- 593. Fruit of Sesame is called**
 (a) Peg (b) Silique
 (c) Achene (d) Capsule
- 594. Critical moisture content beyond which Aflatoxin will develop is**
 (a) 5% (b) 9%
 (c) 12% (d) 18%
- 595. Average shelling percentage of Groundnut is**
 (a) 60-65% (b) 70-75%
 (c) 75-80% (d) 55-60%
- 596. Test weight of Sunflower ranges from:**
 (a) 30-50gm (b) 20-50gm
 (c) 40-60gm (d) 30-40gm
- 597. Sowing depth of Sunflower;**
 (a) 2-6cm (b) 3-7cm
 (c) 5-8cm (d) 6-10cm
- 598. Which crop is reported to remove the most nutrients per unit of dry matter production among the oilseeds:**
 (a) Safflower (b) Linseed
 (c) Soybean (d) Sunflower
- 599. Sunflower seed contain anti-nutritional constituents like**
 (a) Chlorogenic acid
 (b) Phenolic compounds
 (c) both a & b
 (d) Aliphatic compounds.
- 600. JL-24 of Groundnut belongs to variety**
 (a) Virginia bunch (b) Valencia
 (c) Spanish bunch (d) Virginia runner
- 601. Which of the following varieties of Soybean is early maturing?**
 (a) PK 262 (b) PK 1029
 (c) PK 1042 (d) PK 327
- 602. Spring Soybean is grown between**
 (a) 1 March to 1 April
 (b) 15 March to 15 April
 (c) 15 February to 15 March
 (d) 1 February to 1 March
- 603. Nitrogen % in ground nut cake is**
 (a) 6-7% (b) 7-8%
 (c) 8-9% (d) 9-10%
- 604. Highest linoleic acid content is in**
 (a) soybean (b) sunflower
 (c) safflower (d) groundnut
- 605. Iodine no. of soybean oil is**
 (a) 120 (b) 140
 (c) 160 (d) 200
- 606. Daily oilseed requirement is**
 (a) 24g/capita/day (b) 30g/capita/day
 (c) 28g/capita/day (d) 38g/capita/day
- 607. Groundnut is source of all vit B except**
 (a) B13 (b) B12
 (c) B14 (d) B15
- 608. Which variety of groundnut has highest yield**
 (a) ICGS 11 & 44 (b) TMV-10 & 11
 (c) M-13 (d) ICGS 12
- 609. Protein content in shell of groundnut is**
 (a) 6% (b) 7%
 (c) 8% (d) 11%
- 610. Beany taste in soybean is due to**
 (a) Manganese (b) Sulfur
 (c) Zinc (d) calcium

- 611. Which crop is known as gold crop of America**
 (a) cotton (b) groundnut
 (c) maize (d) soybean
- 612. Major pest of groundnut is**
 (a) White grub (b) Pod borer
 (c) aphid (d) Thrips
- 613. Pegging stage in groundnut comes after**
 (a) 30 D.A.S. (b) 45 D.A.S.
 (c) 55 D.A.S. (d) 35 D.A.S.
- 614. Sunflower is in nature.**
 (a) Protoandry (b) Protogyny
 (c) Both a & b (d) sessile
- 615. For spring crop of soybean seed should be ___ than that of *kharif* planting.**
 (a) More (b) Less
 (c) similar (d) Double
- 616. First sunflower hybrid is**
 (a) DSH 1 (b) BSH 1
 (c) COSH 1 (d) Both a & b
- 617. Sesamum belongs to the family:**
 (a) Leguminosae (b) Papilionaceae
 (c) Pedaliaceae (d) Chinopodeaceae
- 618. Soybean is classified as:**
 (a) Oilseed crop (b) Legume
 (c) Pulse (d) None of the above
- 619. First safflower hybrid released is**
 (a) DSH 129 (b) MKH 11
 (c) Both a & b (d) DSH 1
- 620. Sunflower is a _____ crop**
 (a) self-pollinated (b) cross-pollinated
 (c) Both (a) and (b) (d) parthenocarpous
- 621. Ground nut variety preferred for table purpose is**
 (a) TMV 6 (b) Kopergaon No.3
 (c) Jyothi (d) Both a & b
- 622. The crop of sunflower can be effectively grown in _____ season**
 (a) Rabi and Zaid (b) Rabi, Zaid and Kharif
 (c) Kharif and Zaid (d) Kharif
- 623. The optimum temperature for germination of soybean is**
 (a) 11 °C (b) 20 °C
 (c) 15 °C (d) 30 °C
- 624. The optimum time for *kharif* soybean planting is**
 (a) First fortnight of june
 (b) First fortnight of july
 (c) Second fortnight of june
 (d) Second fortnight of july
- 625. The optimum time for sowing of sunflower during *kharif* in India is:**
 (a) First fortnight of june
 (b) Second fortnight of june
 (c) First fortnight of july
 (d) Second fortnight of july
- 626. The recommended planting geometry for sesame is _____ cm**
 (a) 25x75 (b) 30x15
 (c) 30x10 (d) 45x15
- 627. The recommended seed rate of sunflower varies from _____ kg/ha.**
 (a) 5-7.5 (b) 8-10
 (c) 10-12 (d) 12-14
- 628. The scientific name of erect type of groundnut is:**
 (a) *Arachis hypogaeae subspecies fastigata*
 (b) *Arachis hypogaeae subspecies procumbens*
 (c) *Arachis hypogaeae subspecies oleifera*
 (d) *Arachis hypogaeae subspecies gigantea*
- 629. Scientific name of black mustard is**
 (a) *Brassica nigra* (b) *Brassica napus*
 (c) *Brassica juncea* (d) *Brassica campestris*
- 630. The germination in sunflower is known as**
 (a) Epigeal (b) Hypogeal
 (c) Hypo-epigeal (d) Epi-hypogeal
- 631. GMS lines of Yellow sarson**
 (a) YSMS 2 (b) YSMS 6
 (c) YSMS 8163 (d) all the above
- 632. Highest productivity of sunflower in India was recorded by**
 (a) Tamil Nadu (b) Bihar
 (c) Rajasthan (d) Uttar Pradesh
- 633. Niger belongs to the family**
 (a) Poaceae (b) Pedaliaceae
 (c) compositae (d) Leguminosae
- 634. Origin of Niger is**
 (a) Mexico (b) Egypt
 (c) Brazil (d) Ethiopia
- 635. Oil content in Niger is**
 (a) 25-30% (b) 35-40%
 (c) 45-50% (d) 55-60%
- 636. The basic chromosome no. (n) of Niger is**
 (a) 17 (b) 15
 (c) 12 (d) 30
- 637. In Niger the germination is**
 (a) Epigeal (b) Hypogeal
 (c) Epi-hypogeal (d) Hypo-epigeal

- 638. Fruit of Niger is called**
 (a) Achene (b) Siliqua
 (c) capitula (d) capsule
- 639. Niger is a season crop**
 (a) Kharif (b) Rabi
 (c) Zaid (d) All the above
- 640. Optimum soil pH for Niger is**
 (a) 5.2-7.3 (b) 4.0-6.2
 (c) 3.0-5.0 (d) 7.2-8.3
- 641. Niger seed should be sown at _____ cm deep.**
 (a) 1-3 (b) 2-3
 (c) 3-4 (d) 4-5
- 642. Test weight of Niger ranges from**
 (a) 2-4 g (b) 5g
 (c) 3-5g (d) 4-6g
- 643. The ideal system of irrigation in Niger is**
 (a) Check basin (b) Border strip
 (c) Both (a) and (b) (d) None of this
- 644. Moisture percentage for storage in Niger is**
 (a) 9% (b) 11%
 (c) 15% (d) 5%
- 645. Castor is originated in:**
 (a) India (b) Tropical Africa
 (c) Ethiopia (d) Tropical Asia
- 646. Topping of safflower plants is beneficial:**
 (a) To reduce lodging
 (b) To promote branching and flowering
 (c) To reduce water loss.
 (d) All of these.
- 647. Directorate of oilseed research is located at**
 (a) Hyderabad(AP) (b) Karnal(Haryana)
 (c) Indore (MP) (d) None
- 648. Mustard variety resistant to orbanche**
 (a) Durgamani (b) Pusa Bold
 (c) RH 30 (d) Saurabh
- 649. Optimum seed rate for getting desired population of castor(kg/ha)is:**
 (a) 12-15 (b) 18-20
 (c) 20-25 (d) 25-30
- 650. The oil content of safflower is**
 (a) 20-15% (b) 15-20%
 (c) 28-32% (d) 25-30%
- 651. Ground nut is .**
 (a) modified fruit
 (b) modified stem
 (c) modified root
 (d) modified tuber
- 652. pH range suitable for cultivation of safflower:**
 (a) 4-7 (b) 5-6
 (c) 5-8 (d) 6-8
- 653. The Nitrogen requirement for safflower under rainfed condition ranges from:**
 (a) 25-40 (b) 25-50
 (c) 30-40 (d) 30-50
- 654. Sowing time for safflower is:**
 (a) Sept-Oct (b) Oct-Nov
 (c) Aug-Sept (d) Jan-Feb
- 655. The percentage of protein content in safflower cake is**
 (a) 30 (b) 20
 (c) 40 (d) 50
- 656. The best edible oil**
 (a) Safflower (b) Groundnut
 (c) Sesamum (d) Soybean
- 657. The best harvesting time for safflower**
 (a) Evening (b) Noontime
 (c) Morning before 10 (d) Morning after 10
- 658. The duration of safflower is**
 (a) 110-120 (b) 115-150
 (c) 120-130 (d) 115-140
- 659. The root system of castor is**
 (a) Tap root (b) Fibrous root
 (c) Adventitious (d) None
- 660. Soil suitable for cultivation of castor**
 (a) Well drained loamy soil
 (b) Sandy soil
 (c) Clay loam
 (d) Black soil
- 661. Maturity indices of safflower**
 (a) Upper leaves turn dry and brown
 (b) Lower leaves turn dry and brown
 (c) Whole leaves turn dry and brown
 (d) None
- 662. Water Use Efficiency of safflower (kg/seed/ha/mm) is**
 (a) 6.73 (b) 7.49
 (c) 5.64 (d) 5.99
- 663. Castor is usually grown in**
 (a) Rainfed (b) Irrigated
 (c) Both (d) Dryland
- 664. The chromosomal no. of safflower is**
 (a) $2n=26$ (b) $2n=28$
 (c) $2n=24$ (d) $2n=22$

- 665. Bhima is a variety of**
 (a) Rapeseed and mustard (b) Safflower
 (c) Castor (d) Groundnut
- 666. Current president of ICAR**
 (a) Dr B.P.Pal (b) Dr S Ayyappan
 (c) H S Gupta (d) Radha Mohan Singh
- 667. The chief material for production of sebacic acid**
 (a) Sunflower oil (b) Safflower oil
 (c) Castor oil (d) Mustard oil
- 668. The type of germination in castor is**
 (a) Epigeal (b) Hypogeal
 (c) Both a and b (d) Epi-hypogeal
- 669. Aruna is a variety of**
 (a) Castor (b) Sesamum
 (c) mustard (d) Groundnut
- 670. Causal organism of wilt in safflower**
 (a) Puccinia gramini
 (b) Peronospora spp
 (c) Sclerotinia sclerotiarum
 (d) Xanthomonas spp
- 671. Highest producer of safflower in India**
 (a) Kerela (b) Mizoram
 (c) MP (d) Maharashtra
- 672. Yellow revolution represents**
 (a) Milk production
 (b) Egg production
 (c) Fish production
 (d) Oilseeds production
- 673. Safflower is a _____ plant**
 (a) Thermosensitive (b) Photosensitive
 (c) Both (d) None
- 674. *Carthamus tinctorius* is the botanical name of**
 (a) Linseed (b) Soyabean
 (c) Groundnut (d) Safflower
- 675. Castor is used as a**
 (a) Laxative (b) Biodiesel
 (c) Both a and b (d) None
- 676. In India the following crops have a share of 78% of total oil seed production:**
 (a) Groundnut and rapeseed
 (b) Groundnut and sunflower
 (c) linseed and sunflower
 (d) niger and groundnut
- 677. The optimum plant population for mustard is around:**
 (a) One lakh (b) Two lakhs
 (c) Three lakhs (d) four lakhs
- 678. The mustard crop is regarded ready for harvest when its pod turn**
 (a) Greenish yellow (b) Greenish black
 (c) Yellowish green (d) Yellowish brown
- 679. The fruit of rapeseed and mustard is known as:**
 (a) pod (b) Siliqua
 (c) Grain (d) Caryopsis
- 680. Mustard crop planted at a spacing of 50 20 cm will have.....plants/ha**
 (a) 75,000 (b) 1,00,000
 (c) 1,25,000 (d) 1,50,000
- 681. Which one of the following is the best example of catch crop:**
 (a) Linseed (b) Mustard
 (c) Toria (d) Groundnut
- 682. The crops of group rapeseed and mustard(tamaria) belongs to the family:**
 (a) Cruciferae (b) Leguminoseae
 (c) Compositeae (d) Euphorbiaceae
- 683. Maximum yield of mustard is obtained at a plant geometry of:**
 (a) 45×20 (b) 60×30cm
 (c) 30 x 10 (d) 60x20
- 684. Which compound is responsible for pungency in mustard oil?**
 (a) Phenols (b) Amino acids
 (c) Glucosinolates (d) Erucic acid
- 685. Brassica juncea has been evolved after hybridisation between**
 (a) *B.nigra* and *B.campestris*
 (b) *B.nigra* and *B.oleracea*
 (c) *B.campestris* and *B.oleracea*
 (d) *B.campestris* and *B.carinata*
- 686. Canola is a group of plants that belongs to**
 (a) Mustard (b) Safflower
 (c) Niger (d) Sunflower
- 687. Thinning of rapeseed and mustard is done to maintain a plant to plant distance of..cm**
 (a) 5-10 (b) 10-15
 (c) 15-20 (d) 12-15
- 688. The best time for sowing toria is:**
 (a) 15-30 september
 (b) 15-20 september
 (c) 15-25 september
 (d) All of the above
- 689. Brassica juncea is the scientific name of:**
 (a) Rai (b) Toria
 (c) Soybean (d) Wheat

- 690. Technology Mission on oilseeds was established in the year:**
 (a) 1976 (b) 1986
 (c) 1996 (d) 2001
- 691. In Trade.....is known as mustard**
 (a) Brassica juncea (b) Eruca sativa
 (c) Brassica inraa (d) Brassica napus
- 692. Varuna' is a varirty of**
 (a) Linseed (b) Castor
 (c) Rapeseed and Mustard (d) Sunflower
- 693. The seed rate requirement for pure crop of mustard and rapeseed is**
 (a) 6-6.5 kg/ha (b) 6-7.5 kg/ha
 (c) 5-6 kg/ha (d) 7.5-8 kg/ha
- 694. Critical weed free period mustard- rapeseed is**
 (a) Upto 25 days (b) Upto 40 days
 (c) Upto 60 days (d) None of this
- 695. Herbicide suitable for controlling weeds in mustard field is**
 (a) Fluchloralin (b) Pendimethalin
 (c) Isoprotruron (d) All of this
- 696. Origin of mustard is**
 (a) India (b) China
 (c) Afghanistan (d) USA
- 697. Critical stages for irrigation of mustard crop is**
 (a) Rosette stage (b) Siliqua-formation
 (c) Both (a) and (b) (d) Siliqua maturity
- 698. Most widely cultivated mustard type in india is**
 (a) Toria (b) Yellow/brown sarson
 (c) Indian mustard (d) Black mustard
- 699. Mustard type used for condiment purpose is**
 (a) Toria
 (b) Yellow/Brown sarson
 (c) Indian mustard
 (d) Black mustard
- 700. Important reason for low yield in rapeseed/ mustardis**
 (a) Non availability of high yielding varieties
 (b) Long duration and poor response to applied inputs
 (c) Susceptible to pest and diseases
 (d) All of these
- 701. Rapeseed/mustard posses _____% of erucic acid**
 (a) 5-10 (b) 10-30
 (c) 38-57 (d) 57-90
- 702. Which is the oilseed cum fibre crop?**
 (a) Linseed (b) Sesame
 (c) Groundnut (d) Mustard
- 703. For better maturity,linseed requires**
 (a) High temperature (b) Low moisture
 (c) Dry weather (d) All of these
- 704. The ideal temperature range for linseed growth is _____**
 (a) 21-24 (b) 15-20
 (c) 23-26 (d) 25-30
- 705. Linseed belongs to family....**
 (a) Graminae (b) Cruciferae
 (c) Linaceae (d) Compositae
- 706. Largest acreage of linseed is in _____**
 (a) India (b) Canada
 (c) USA (d) Germany
- 707. Seed rate required for linseed crop is**
 (a) 10-20 kg/ha (b) 35-40 kg/ha
 (c) 50-60 kg/ha (d) 80-100 kg/ha
- 708. Leading linseed producer in India is...**
 (a) Uttar Pradesh (b) Andhra Pradesh
 (c) Madhya Pradesh (d) Tamilnadu
- 709. Linseed is sensitive to _____**
 (a) Frost at flowering
 (b) Water logging
 (c) Extended drought
 (d) All of these
- 710. Which of the following is a dual purpose(oil and fibre) variety of linseed?**
 (a) Jeewan (b) Nagarkot
 (c) Gaurav (d) All of these
- 711. The fruit of the linseed crop is known as....**
 (a) Pod (b) Siliqua
 (c) seed ball (d) Achene
- 712. High rainfall and cloudy weather during..... period is very harmful to linseed crop**
 (a) Flowering (b) Vegetative
 (c) Seedling (d) Rosette
- 713. Linseed oil is rich in.....**
 (a) Oleic acid (b) Linoleic acid
 (c) Linolenic acid (d) Erucic acid
- 714. Critical weed free period for linseed is...**
 (a) 20-30 DAS (b) 30-40 DAS
 (c) 20-45 DAS (d) 30-35 DAS
- 715. Oil content of linseed is.....**
 (a) 35-40 (b) 37-44
 (c) 40-45 (d) 25-30
- 716. In sesame early sowing in kharif season leds to high incidence of.....**
 (a) Phyllody (b) Wilt
 (c) Shoot fly (d) Powdery mildew

717. Which crop is known as the 'Grand Pea'?
- (a) Linseed (b) Groundnut
(c) Soybean (d) Castor
718.is a bunch type variety of groundnut.
- (a) Jalwa (b) JL 24
(c) Narbada 4 (d) All of these
719. Early leaf spot of ground nut is caused by
- (a) *Cercospora arachidicola*
(b) *Cercospora personata*
(c) Both a & b
(d) *Cercospora graminiae*
720. Stiff clay soil are not suitable to groundnut cultivation because
- (a) Root elongation is hampered due to anaerobic conditions in the rhizosphere
(b) Flowering is delayed
(c) Pod development is hampered
(d) Growth is arrested
721. Application of 500kg/ha of gypsum is recommended for growing crop at
- (a) Sowing time
(b) 15 days before sowing
(c) Pegging stage
(d) Time of irrigation
722. The inflorescence in groundnut is
- (a) Raceme (b) Panicle
(c) Spikelets (d) Ear
723. The recommended seed rate for spreading type groundnut is
- (a) 80-90kg/ha (b) 50-60 kg/ha
(c) 70-80 kg/ha (d) 60-70 kg/ha
724. Bunch type of groundnut belongs to sub species
- (a) *Fastigata* (b) *Procumbens*
(c) *Javanica* (d) *Indica*
725. Groundnut contains.....% of oil & protein respectively
- (a) 40 & 18 (b) 38 & 18
(c) 44-50 & 20- 24 (d) 44-50 & 18- 20
726. Sunflower has the seed multiplication ratio of
- (a) 1:80 (b) 1:100
(c) 1:200 (d) 1:400
727. The groundnut seed is known as
- (a) Kernel (b) Pod
(c) Caryopsis (d) Capsule
728. Groundnut crop needs
- (a) Warm & humid climate (b) Hot & humid climate
(c) Dry & Hot conditions (d) Cold & Dry climate
729. IW:CPE ratio during groundnut early & reproductive stages respectively are
- (a) 0.5 & 0.75 IW:CPE
(b) 0.75:0.5 IW:CPE
(c) 0.25 & 0.5 IW : CPE
(d) 0.5%O.25IW:CPE
730. Critical Growth Stages in which irrigation is most needed in Ground nut is
- (a) Vegetative stage (b) Flowering & pegging
(c) Pod formation (d) Pod development
731. Earthing up in groundnut is done in.....
- (a) 35 DAS (b) 40 DAS
(c) 45DAS (d) After 45 DAS
732. Earthing up in groundnut is done because of
- (a) It facilitates peg penetration
(b) It facilitates gypsum application
(c) Both a & b
(d) Noneofthese
733. Phosphorus in ground nut helps in
- (a) Root and kernel development
(b) Formation and growth of nodule
(c) Early flowering and Pegging
(d) Only a & b are correct
734. Toxic and carcinogenic substance present in groundnut is
- (a) Aflatoxin produce by *Aspergillus flavus*
(b) Aflatoxin produce by *Aspergillus parasiticus*
(c) Coumarins
(d) Saponins
735. TEMPO was set up in
- (a) 1986 (b) 1968
(c) 1956 (d) 1958
736. Rabi groundnut gives higher yield than *Kharif* groundnut due to:
- (a) Better management
(b) Less incidence of pest and disease
(c) Both a & b
(d) Low temperature
737.is essential for synthesis of oil & protein
- (a) Calcium (b) Sulphur
(c) Boron (d) None of these
738.is essential for development and proper growth of groundnut
- (a) Calcium (b) Sulphur
(c) Boron (d) None of these
739. Pop pod of groundnut is due to deficiency of
- (a) Ca (b) B
(c) S (d) Zn

740. **Type of germination in Groundnut is.....**
 (a) Hypogeal (b) Epigeal
 (c) Cleistogea (d) Viviparous

COMMERCIAL CROPS

CROP : COTTON

741. **Delinting of cotton seed may be done with:**
 (a) Conc. Sulphuric acid (b) Conc. Citric acid
 (c) Sodium hydroxide (d) Ammonium chloride
742. **Cotton belongs to family**
 (a) Tilliaceae (b) Malvaceae
 (c) Cruciferae (d) none of these
743. **n=13, is the composition of the following species of cotton**
 (a) G. arboreum (b) G. herbaceum
 (c) G. hirsutum (d) both (a) & (b)
744. **n=26, is the composition of the following species of cotton**
 (a) G. herbaceum (b) G. barbadense
 (c) G. hirsutum (d) both (b) & (c)
745. **Desi cotton is**
 (a) G. arboreum (b) G. herbaceum
 (c) G. hirsutum (d) both (a) & (b)
746. **American cotton is**
 (a) G. herbaceum (b) G. barbadense
 (c) G. hirsutum (d) both (b) & (c)
747. **Group of cotton called as "Sea Island cottons" is**
 (a) G. herbaceum (b) G. barbadense
 (c) G. hirsutum (d) G. arboretum
748. **The flowers of cotton open in about ____ days after the squares are seen.**
 (a) 18-24 (b) 24-30
 (c) 30-45 (d) 45-50
749. **Minimum temp. requirement for germination in cotton is**
 (a) 10°C (b) 22°C
 (c) 16°C (d) 30°C
750. **Cotton plant can be cultivated to an altitude**
 (a) Above 1000 metres (b) Upto 1000 metres
 (c) Only upto 800 metres (d) Depends on variety
751. **In terms of the area sown, which one of the following crops occupies the most important position in India?**
 (a) Jute (b) Cotton
 (c) Mustard (d) Groundnut
752. **Minimum annual rainfall requirement of Cotton throughout its growing season is**
 (a) 80cm (b) 35cm
 (c) 50cm (d) 100cm
753. **Oil content in the cotton seed ranges from**
 (a) 10-15 (b) 25-30
 (c) 15-25 (d) 30-35
754. **Variety of cotton is**
 (a) H-777 (b) KCI
 (c) ST-55 (d) OL-9
755. **Recommended seed rate for American cotton is**
 (a) 12-15kg/ha (b) 15-25kg/ha
 (c) 25-30kg/ha (d) 30-35kg/ha
756. **Spacing for American cotton is**
 (a) 30×15cm (b) 45×20cm
 (c) 50×30cm (d) 60×30cm
757. **Recommended seed rate for Desi cotton is**
 (a) 8-12kg/ha (b) 10-15kg/ha
 (c) 30-35kg/ha (d) 20-25kg/ha
758. **Spacing for Desi cotton is**
 (a) 60×30cm (b) 45×20cm
 (c) 60×15cm (d) 35×15cm
759. **The most damaging pests of cotton is**
 (a) Pink boll worm
 (b) American boll worm
 (c) Spotted boll worm
 (d) Cotton Leaf Roller
760. **Cycocel used in spraying a cotton is**
 (a) Herbicide (b) Insecticide
 (c) Hormones (d) Fungicide
761. **Under what bill did cotton farmers receive a direct payment of 6.66 cents per pound of cotton?**
 (a) 2002 Adjusted cotton bill
 (b) 2002 sharecropper's bill
 (c) 2002 cotton bill
 (d) 2002 farm bill
762. **Largest cotton producer is**
 (a) India (b) USA
 (c) China (d) Brazil
763. **Nitrogen fertilizer can be top dressed to Cotton upto**
 (a) Vegetative (b) 1st flowering
 (c) Square formation (d) Boll bursting
764. **1st Cotton varietal improvement work was started during**
 (a) 1972 (b) 1960
 (c) 1967 (d) 1970

765. Staple length of “Long staple cotton” is
 (a) 10mm (b) 25.4m
 (c) 16.6mm (d) 27.5mm
766. Varalaxmi is hybrid developed in
 (a) Rice (b) Cotton
 (c) Brinjal (d) Brassica
767. The fineness of yarn is expressed as
 (a) Hanks (b) Count
 (c) Yards (d) None of these
768. Delinting of cotton helps in
 (a) Grading the seed
 (b) Killng of hibernating bollworm larvae and disease pathogen
 (c) Quicker germination
 (d) All of these
769. International year of “fibre” is
 (a) 2008 (b) 2009
 (c) 2010 (d) 2011
770. *MCU 5* is a
 (a) Extra long staple cotton
 (b) Medium long staple cotton
 (c) Short long staple cotton
 (d) Superior long staple cotton
771. Among the Cotton cultivated species, which is the pre-dominant species?
 (a) *G. hirsutum*
 (b) *G. herbaceum*
 (c) *G. arboreum*
 (d) *G. barbadense*
772. The ratio of cotton seed to lint is.....
 (a) 1:2 (b) 1:3
 (c) 2:1 (d) 4:1
773. The optimum population of Hybrid cotton is around.....plants/ha
 (a) 10000 (b) 20000
 (c) 30000 (d) 50000
774. Gujarat-67 and American nectariless are parents of cotton Hybrid.....
 (a) Hybrid-4 (b) Varalaxmi
 (c) Hybrid-6 (d) Vikram
775. The cotton growing area in India can be broadly divided into.....zones
 (a) 4 (b) 3
 (c) 5 (d) 2
776. Sujata, the 1st commercial extra long *G. barbadense* cotton was released in the year
 (a) 1969 (b) 1979
 (c) 1989 (d) 1999
777. The diploid cotton are mainly cultivated in..... tract
 (a) Irrigated (b) Dryland
 (c) Rainfed (d) None of these
778. The 1st commercial Hybrid cotton H-4 was released in the year
 (a) 1970 (b) 1980
 (c) 1969 (d) 1999
779. The effective flowering period of cotton ranges from.....days
 (a) 20-35 (b) 35-45
 (c) 45-90 (d) 90-120
780. Central Institute of Cotton Research is located at
 (a) Kanpur (b) Nagpur
 (c) Jabalpur (d) Barackpur
781. Rainfed Cotton usually suffers from moisture stress during development stage
 (a) Capsule (b) Boll
 (c) Square (d) None of these
782. Topping in Cotton is done at.....metre height
 (a) 1-1.2 (b) 0.5-1.0
 (c) 1.2- 1.5 (d) 2
783. The range for Ginning percentage of *G. barbadense* is
 (a) 28-30 (b) 33-38
 (c) 36-42 (d) 45-51
784. Bad opening of boll in Cotton is known as
 (a) Mareck (b) Tirak
 (c) dead boll (d) none of these
785. The oil content in the cotton seed ranges from
 (a) 10-15% (b) 15-25
 (c) 25-35 (d) 40-42
786. Weight of 1 bale of cotton is equal to
 (a) 160kg (b) 170kg
 (c) 180kg (d) 178kg
787. In most *G. hirsutum* Varieties, the 1st fruiting branch develops on the....main node
 (a) 4-5th (b) 5-7th
 (c) 8-9th (d) 9-10th
788. The state which has initiated the monopoly procurement of cotton is
 (a) Gujarat (b) Maharashtra
 (c) Madhya Pradesh (d) West Bengal
789. The 1st extra long staple variety released in India is
 (a) MCU5 (b) MCU6
 (c) MCU7 (d) MCU9

790. Which of the following is transgenic Bt. Hybrid?
 (a) Sabitha (b) Varlaxmi
 (c) DCH-32 (d) Brahma
791. In *G. barbadense* the only variety under cultivation is
 (a) Subin (b) Varalaxmi
 (c) Dharwad (d) Anjali
792. Anthracnose of Cotton is caused by
 (a) *Colletotrichum falcatum*
 (b) *Colletotrichum indicum*
 (c) *Colletotrichum gleosporoides*
 (d) *Colletotrichum capsici*
793. Toxic substance present in Cotton is
 (a) Dhurin (b) Gossypols
 (c) Lantradene-A (d) neurotoxin
794. What is seed rate of cotton in kg/ha, if the planting geometry is 75 X 50 cm and test weight, germination and purity percent are 140 g , 90 and 95% respectively
 (a) 4.37 (b) 4.0
 (c) 2.07 (d) 5.21

CROP: JUTE AND ALLIED FIBRES

795. The process of dipping of jute bundles in water is called
 (a) Steeping (b) Extraction
 (c) Retting (d) None of these
796. Ribboning is associated with which crop?
 (a) Cotton (b) Jute
 (c) Linseed (d) Sunnhemp
797. Leading jute producing state in India is
 (a) Assam (b) West Bengal
 (c) Uttar Pradesh (d) Orissa
798. Which of the followings is associated with fibre crops?
 (a) Nipping (b) Retting
 (c) Propping (d) Curing
799. Jute belongs to family
 (a) Pedaliaceae (b) Tiliaceae
 (c) Malvaceae (d) Solanaceae
800. White jute is taxonomically known as
 (a) *Corchorus capsularis*
 (b) *Corchorus olitorius*
 (c) *Corchorus trilocularis*
 (d) *Corchorus tridents*
801. Tossa jute is botanically known as
 (a) *Corchorus olitorius* (b) *Corchorus capsularis*
 (c) *Corchorus trilocularis* (d) *Corchorus tridents*
802. White jute variety suitable for all conditions is
 (a) JRC 321 (b) JRC 212
 (c) D 154 (d) JRC 4444
803. The wild species of jute is
 (a) *Corchorus antichorous*
 (b) *Corchorus acutangulus*
 (c) Both a & b
 (d) None of these
804. Retting is a process by which
 (a) The poor fibre stalk is sorted out
 (b) The fibre in the bark get loosened and separated from woody stalk
 (c) The good quality fibre is sorted out
 (d) Fibre are differentiated into various retted groups
805. Common weed associated with sunnhemp is
 (a) *Ipomea* (b) *Striga*
 (c) *Orobanche* (d) *Cuscuta*
806. Mesta is a
 (a) Oilseed crop (b) Pulse crop
 (c) Fibre crop (d) Medicinal crop
807. Sisal (agave) plant is popularly known as
 (a) Century plant (b) Sunnhemp
 (c) Flax (d) Ramie
808. The fibre of mesta is obtained from the stem of
 (a) Roselle (b) Jute
 (c) Ramie (d) Flax
809. Which of the following fibre is blended with plastics?
 (a) Sisal (b) Flax
 (c) Jute (d) Sunnhemp
810. Fibre used for preparation of tissue papers and currency is
 (a) Jute (b) Sunnhemp
 (c) Agave (d) Mesta
811. Sunnhemp is botanically known as
 (a) *Crotalaria juncea* (b) *Agave sisalana*
 (c) *Linum usitatissimum* (d) None of these
812. Seed of which crop is suitable for preparation of adhesives
 (a) Sunnhemp (b) Linseed
 (c) Sisal (d) Ramie
813. Bombay hemp or Banaras hemp is also known as
 (a) Sunnhemp (b) Jute
 (c) Sisal (d) Linseed
814. Sisal belongs to the family
 (a) Liliaceae (b) Pedaliaceae
 (c) Tiliaceae (d) Asparagaceae

- 815. Under and over retting of jute results into**
 (a) Poor quality fibre (b) Good quality fibre
 (c) Croppy fibre (d) Gramineae
- 816. The term stripping is associated with**
 (a) Tobacco (b) Jute
 (c) Cotton (d) Tea
- 817. Which of the following is a parenchymatus fibre**
 (a) Cotton (b) Jute
 (c) Sunnhemp (d) None of these
- 818. The best observed pH for jute cultivation is**
 (a) 5.0 – 5.5 (b) 6.0 – 7.5
 (c) 7.5 – 8.5 (d) 8.5 -9.5
- 819. The optimum sowing time of capsularis Jute is**
 (a) March-April (b) February –March
 (c) April-May (d) May-June
- 820. For fibre purpose, Jute, may be harvested at any time**
 (a) After pod formation (b) After flowering
 (c) Before pod formation (d) Before flowering
- 821. Green manuring of sunnhemp adds approximately ...kg N/ha to the soils on decomposition**
 (a) 20-40 (b) 40-60
 (c) 60-80 (d) 100-120
- 822. Sunnhemp belongs to the family**
 (a) Leguminosae (b) Gramineae
 (c) Compositae (d) Tiliaceae
- 823. The optimum temperature for retting of jute is**
 (a) 20-25°C (b) 25-30°C
 (c) 30-35°C (d) 35-40°C
- 824. The ideal stage of harvest of jute for fibre purpose is**
 (a) One month old stage (b) Bud stage
 (c) Flowering stage (d) Mature pod stage
- CROP: SUGARBEET**
- 825. The inflorescence in sugar beet is**
 (a) Siliqua (b) Open panicle
 (c) Spikelets (d) Ear
- 826. Optimum temperature towards germination of sugar beet ranges between**
 (a) 21-37 °C (b) 25-30 °C
 (c) 20-25 °C (d) None
- 827. Optimum temperature for growth and sugar accumulation in sugar beet ranges between**
 (a) 21-37 °C (b) 25-30 °C
 (c) 20-22 °C (d) None
- 828. The recommended seed rate for sugar beet is _____ kg/ha**
 (a) 8-10 (b) 12-15
 (c) 15-18 (d) 20-25
- 829. Higher yield of sugar beet could be achieved by:**
 (a) Use of higher dose of phosphate
 (b) Adequate amount of N
 (c) No nitrogen application
 (d) Closer planting
- 830. Problem in sugar extraction from roots is due to**
 (a) Use of higher dose of phosphate
 (b) Use of excess dose of N
 (c) No nitrogen application
 (d) Closer planting
- 831. The first man to established sugar factory by processing of beet roots**
 (a) F.C.Achard (b) Mac-Mohan
 (c) N.E.Borlounge (d) K.C. Mehta
- 832. Sugar beet is a**
 (a) Salad crop (b) Vegetable crop
 (c) Sugar crop (d) Tuber crop
- 833. Sugar beet belong to the family**
 (a) Chenopodiaceae (b) Crucifereae
 (c) Gramineae (d) Liliaceae
- 834. In sugar beet the sucrose is found in**
 (a) Stem (b) Roots
 (c) Leaves (d) Flower
- 835. Sugar beet is grown in season**
 (a) Kharif (b) Rabi
 (c) Zaid (d) All of them
- 836. In sugar beet the sugar content is %**
 (a) 15-16 (b) 10-12
 (c) 6-8 (d) 16-20
- 837. In sugar beet the sugar recovery is%**
 (a) 15-16 (b) 10-12
 (c) 6-8 (d) 16-20
- 838. A good crop of sugar beet yields t/ha**
 (a) 15-16 (b) 10-12
 (c) 35-50 (d) 16-20
- 839. The optimum row to row spacing for sugar beet iscm**
 (a) 15-20 (b) 10-15
 (c) 40-60 (d) 30-40
- 840. The optimum plant to plant spacing for sugar beet iscm**
 (a) 15-20 (b) 20-25
 (c) 40-60 (d) 30-40

841. The optimum plant population for sugar beet is /ha
 (a) 50,000 (b) 60,000
 (c) 70,000 (d) 1,00,000
842. Optimum fertilizer requirement for sugar beet is
 (a) 120-80-80 (b) 120-60-40
 (c) 120-60-80 (d) None
843. The critical period for crop weed competition in sugar beet is days
 (a) 35-45 (b) 50-60
 (c) 20-30 (d) 45-55
844. Weeds in sugar beet can be effectively controlled by
 (a) Pyramin (b) Sirmet
 (c) Betanol (d) All
845. Weeds in sugar beet can effectively be controlled by post emergence application of
 (a) Pyramin (b) Sirmet
 (c) Betanol (d) All
846. Weeds in sugar beet can effectively be controlled by pre emergence application of
 (a) Pyramin (b) Simazine
 (c) Betanol (d) All
847. Use of Linear measurements of plumule growth as a vigour test for Cereals and sugarbeet was first suggested by
 (a) S. Mathews 1929 (b) J.S Burris 1939
 (c) Germ 1949 (d) Hegarty 1959
848. Sugarbeet is a..... plant
 (a) annual (b) biennial
 (c) perennial (d) none of these
849. Sugar beet matures in
 (a) April/May (b) June/July
 (c) September/October (d) January/February
853. Sugarcane cut for seed-setts should essentially have:
 (a) One bud (b) Two buds
 (c) Three buds (d) Four buds
854. Sugarcane seed setts should be treated with..... against fungal diseases.
 (a) Diathane M-45 (b) Zineb
 (c) Thiram (d) Carbendazim
855. The autumn planting of sugarcane is most successful when planted in the month of:
 (a) September (b) October
 (c) November (d) February
856. Hot water treatment of sugarcane setts is done because
 (a) It increases germination.
 (b) It controls the seed borne diseases.
 (c) It breaks dormancy.
 (d) It promotes the conversion of sucrose into glucose.
857. Autumn sown crop of sugarcane requires..... fertilizer than that of winter sown.
 (a) Equal (b) More
 (c) Less (d) Half
858. Seed rate of sugarcane
 (a) 1.5 – 3 t/ha (b) 10-12 t/ha
 (c) 3 – 4 t/ha (d) 7.5-8 t/ha
859. Bunchy top in sugarcane is caused by
 (a) Root borer (b) Sugarbeet
 (c) Internode borer (d) Top shoot borer
860. 'Ratooning' is practised as a matter of routine in:
 (a) Sugarbeet and sugarcane
 (b) Sugarbeet and maize
 (c) Sugarcane and napier grass
 (d) Sugarcane
861. Trench method of sugarcane planting is used in
 (a) North India (b) Western India
 (c) Coastal areas (d) Waterlogged area
862. Which portion of sugarcane stalks is preferred for sowing purposes?
 (a) Top one-third to half portion
 (b) Top one-fourth portion
 (c) Bottom one-fourth portion
 (d) bottom one-third to half portion
863. Late planting of autumn sugarcane reduces the germination due to
 (a) Short day
 (b) rost
 (c) Low temperature
 (d) High humidity

CROP : SUGARCANE

850. Sugarcane planting in trenching is beneficial because it
 (a) Enhances germination (b) Reduces lodging
 (c) Enhances tillering (d) all the above
851. Which element is essential for sugar translocation in sugarcane?
 (a) P (b) K
 (c) B (d) Mo
852. Most serious disease of sugarcane is
 (a) Red stripe (b) Red rot
 (c) Wilt (d) Smut

- 864. In trash mulching, the early shoot borer is controlled due to**
 (a) Increase the air flow
 (b) Reducing the feeding material
 (c) Change in the micro climate
 (d) None of these
- 865. Indian Sugarcane Institute is located at**
 (a) Kanpur (b) Lucknow
 (c) Coimbatore (d) Nagpur
- 866. AICRP on sugarcane started in**
 (a) 1970-71 (b) 1980-81
 (c) 1985-86 (d) 1966-67
- 867. Wonder cane is**
 (a) COC 671 (b) CO 86032
 (c) COC 417 (d) CO 86029
- 868. Leaf bleaching in sugarcane is due to**
 (a) Fe deficiency (b) Fe toxicity
 (c) Mn deficiency (d) Mn toxicity
- 869. Which crop gives highest sugarcane yield**
 (a) Autumn planted
 (b) Spring planted
 (c) Summer planted
 (d) All the above
- 870. Brix reading in field is measured through**
 (a) planimeter (b) Tensiometer
 (c) Hydrometer (d) Hand refractometer
- 871. Crop logging technique in Sugarcane was developed by**
 (a) Dr.H.F.Clements (b) Dr.R.S.Paroda
 (c) Dr.N.E.Borlaug (d) none of these
- 872. Which among the following is most suitable variety for ratooning**
 (a) CO 1148 (b) CO 997
 (c) CO 527 (d) All the above
- 873. The first manmade Indian Hybrid sugarcane is**
 (a) CO 205 (b) CO 419
 (c) CO 213 (d) CO 449
- 874. In space transplanting (STP) the quantity of sugarcane required is**
 (a) 2 t/ha (b) 6 t/ha
 (c) 4 t/ha (d) 5 t/ha
- 875. Which of the following is a chemical clarificant of sugarcane juice**
 (a) Lime water (b) Sodium Carbonate
 (c) alum (d) All of these
- 876. Generally sugarcane flowers in months**
 (a) 9-12 (b) 6-8
 (c) 4-6 (d) 11-12
- 877. First intergenetic hybrid was developed in**
 (a) 1916 (b) 1996
 (c) 1936 (d) 1966
- 878. Molasses is used for the production of**
 (a) Alcohol (b) Sugar
 (c) Glucose (d) Gur
- 879. Chlorosis in sugarcane ratooning is controlled by the use of**
 (a) ZnSO₄ (b) MnSO₄
 (c) FeSO₄ (d) CuSO₄
- 880. Sugarcane generally takes weeks for its germination**
 (a) 1-2 (b) 2-3
 (c) 3-4 (d) 5-8
- 881. In India, sugarcane growing area is classified into.....zones**
 (a) 3 (b) 8
 (c) 5 (d) 15
- 882. Critical period for crop weed competition in sugarcane is**
 (a) 1 month (b) 2 months
 (c) 3 months (d) 4 months
- 883. Sugarcane zone produces the highest sugar recovery in India is**
 (a) Central zone
 (b) North zone
 (c) East zone
 (d) Coastal zone
- 884. Which among the micro nutrient has greater role in juice quality of sugarcane?**
 (a) B (b) Mo
 (c) Cu (d) Mn
- 885. Which type of irrigation is more economical in sugarcane cultivation?**
 (a) Flood (b) Furrow
 (c) Skip-furrow (d) All of these
- 886. Percentage of sugarcane produced is used for production of gur is**
 (a) 5-10 (b) 10-20
 (c) 30-35 (d) 40-50
- 887. First successful hybrid of sugarcane developed at Coimbatore is**
 (a) CO 449 (b) Co 997
 (c) CO 205 (d) Co 975
- 888. How many percent of Khandsari can be obtained from Gur refined**
 (a) 37.5% (b) 20.0%
 (c) 42.5% (d) 22.5%

- 889. The sugarcane is a**
 (a) Intermediate photoperiod
 (b) Short day photoperiod
 (c) Long day photoperiod
 (d) All the above
- 890. For harvest of sugarcane the brix ratio of the lower and above portion of the Stem should be**
 (a) 0.2-0.3 (b) 0.5-0.6
 (c) 0.7-0.8 (d) 0.9-1.0
- 891. The young inflorescence of sugarcane is called a**
 (a) spike (b) Arrow
 (c) Tassel (d) Panicle
- 892. The number of three budded sets needed for planting one hectare of sugarcane is**
 (a) 10-15 thousand (b) 15-25 thousand
 (c) 35-40 thousand (d) 50-60 thousand
- 893. Which portion of sugarcane stalk is not preferred for sowing purposes**
 (a) Top one-third to half portion
 (b) Top one-fourth portion
 (c) Bottom one-fourth portion
 (d) Bottom one third to half portion
- 894. The top portion of sugarcane should be selected for seed purposes because bud tissues are rich in**
 (a) Sucrose (b) Glucose
 (c) Galactose (d) Maltose
- 895. Sugar recovery from sugarcane juice is %**
 (a) 9.2-11 (b) 7.5-9
 (c) 10-15 (d) 15-18
- 896. Rayungans is seed material associated with**
 (a) Rice (b) Elephant
 (c) Sugarcane (d) Pearlmillet
- 897. Brix measures**
 (a) TSS (b) SNF
 (c) Fat (d) None of these
- 898. Sugarcane Breeding Institute is located at**
 (a) Kanpur (b) Lucknow
 (c) Coimbatore (d) Delhi
- 899. National Sugar Institute is located at**
 (a) Kanpur (b) Lucknow
 (c) Coimbatore (d) Delhi
- 900. Indian Institute of Sugarcane Research is located at**
 (a) Lucknow (b) Kanpur
 (c) Coimbatore (d) Delhi
- 901. Dr. Barber associated with sugarcane was**
 (a) Agronomist (b) Physiologist
 (c) Economic botanist (d) None of these
- 902. In India sugarcane cultivation can be classified into ecosystems?**
 (a) 2 (b) 3
 (c) 4 (d) 5
- 903. Which cane is known as "Chinese cane"?**
 (a) *S. sinense* (b) *S. officinarum*
 (c) *S. robustum* (d) None of these
- 904. Which one is considered as wild species of sugarcane?**
 (a) *S. robustum* (b) *S. officinarum*
 (c) *S. sinense* (d) None of these
- 905. Which is considered as Indian species of sugarcane?**
 (a) *S. officinarum* (b) *S. barberi*
 (c) *S. robustum* (d) None of these
- 906. The genus *Saccharum* has cultivated species**
 (a) 2 (b) 3
 (c) 5 (d) 7
- 907. The stem pieces of sugarcane used for planting are known as**
 (a) Internode (b) Node
 (c) Sett (d) Stalk
- 908. The cane crop is said to be matured when purity % of juice is**
 (a) Over 70% (b) Over 80%
 (c) Over 85% (d) Over 90%
- 909. The P₂O₅ contents of press mud cake (PMC) is around**
 (a) 1-3% (b) 5-7%
 (c) 3-4% (d) None of these
- 910. At the junction of sheath and blade there is a membranous attachment in cane is known as**
 (a) Ligule (b) Auricle
 (c) Peduncle (d) None of these
- 911. The 'Brix' value in sugarcane juice gives an estimate of**
 (a) Total soluble glucose
 (b) Total soluble sugar
 (c) Total soluble sucrose
 (d) Total soluble solids
- 912. Byproduct of sugar industry is known as**
 (a) Molasses (b) Press mud
 (c) Jaggery (d) None of these

CROP: TOBACCO

- 913. The center of origin of tobacco is**
 (a) India (b) S.America
 (c) S. Africa (d) None

- 914. Flue Cured Virginia (FCV) quality of tobacco is used in the manufacture of**
 (a) Bidi (b) Cigarettes
 (c) Cigar (d) Chewing
- 915. In tobacco, the correct chronological order of practices is**
 (a) Topping- Desuckering- Priming
 (b) Desuckering- topping- priming
 (c) priming- desuckering- topping
 (d) priming- topping- desuckering
- 916. In India the production of tobacco is highest in the state is**
 (a) Punjab (b) Haryana
 (c) Andhra Pradesh (d) Uttar Pradesh
- 917. The inflorescence in tobacco is**
 (a) Receme (b) Panicle
 (c) Spikelets (d) Ear
- 918. Optimum temperature for germination of tobacco is**
 (a) 10 °C (b) 15 °C
 (c) 28 °C (d) 20 °C
- 919. The recommended seed rate for tobacco for 1 ha nursery**
 (a) 8-10 kg/ha (b) 2-3kg/ha
 (c) 5-8 kg/ha (d) 10-12kg/ha
- 920. Higher yield and quality of tobacco could be achieved by**
 (a) Use of higher dose of phosphate
 (b) Adequate amount of N
 (c) No nitrogen application
 (d) Liberal amount of K
- 921. Tobacco yield is largely reduced mainly due to**
 (a) Cold wind at the flowering stage
 (b) Attack of aphids
 (c) Lack of adequate fertilizer application
 (d) Failure to apply Irrigation in flowering stage
- 922. The area need to raise tobacco seedlings by for transplanting one hectare area is**
 (a) 100sqm (b) 50sqm
 (c) 250sqm (d) 400sq
- 923. The chlorine content of tobacco leaves must vary between %**
 (a) 0.5-1.0 (b) 1.5-2.0
 (c) 2.0-2.5 (d) 3.0-3.5
- 924. Nicotine content of the leaves of *Nicotiana rustica* ranges between**
 (a) 2-5.5 % (b) 3-4.5 %
 (c) 1.5-3.0 % (d) 1.75-2.0 %
- 925. Nicotine content of the leaves of *Nicotiana tabacum* ranges between**
 (a) 5-5.5 % (b) 3-4.5 %
 (c) 8- 13 % (d) 3.5- 8 %
- 926. Rainfall at the time of maturity of tobacco is not desired as it causes**
 (a) Washing of gums and resins from leaf
 (b) Lodging
 (c) Rotting of leaves
 (d) Shattering of leaves
- 927. Tobacco belongs to the family**
 (a) Compositeae (b) Gramineae
 (c) Solanaceae (d) Leguminosae
- 928. The optimum time for sowing nursery of tobacco is**
 (a) First fortnight of September
 (b) Second fortnight of September
 (c) First fortnight of August
 (d) Second fortnight of August
- 929. The recommended seed rate of tobacco to raise seedlings for 1 ha area is from**
 (a) 2-3 kg (b) 4-5 kg
 (c) 2-.3 kg (d) 4-.5 kg
- 930. Topping in tobacco means a process of**
 (a) Removal of all buds present in the axil of leaves
 (b) Removal of leaves
 (c) Removal of terminal buds
 (d) Buming of leaves
- 931. Deshi type tobacco is**
 (a) *Nicotiana tabacum* (b) *Nicotiana rustica*
 (c) Both (d) None of these
- 932. The basic aim of topping and desuckering of tobacco is**
 (a) To reduce the plant height
 (b) To enlarge branching
 (c) To divert energy and nutrient from flower head to leaves
 (d) To protect the plants against lodging
- 933. Vilayati type tobacco is**
 (a) *Nicotiana tabacum* (b) *Nicotiana rustica*
 (c) Both (d) None of these
- 934. Which of the following is the curing stage**
 (a) Yellowing (b) Fixing colour
 (c) Drying (d) All the above
- 935. The optimum stage of tobacco seedlings for transplanting under irrigated condition during Kharif season is**
 (a) 2 leaf stage (b) 4 leaf stage
 (c) 6 leaf stage (d) 8 leaf stage

- 936. The fruits of tobacco is**
 (a) Capsule (b) Pod
 (c) Siliqua (d) Caryopsis
- 937.is the deciding factor for quality curing and yield**
 (a) Temperature (b) Sunlight
 (c) Humidity (d) All
- 938. soil reaction results in poor burning quality of leaves.**
 (a) Chloride (b) Phosphorus
 (c) Potassium (d) Sulphur
- 939. soil reaction is better for production of superior quality leaves of tobacco**
 (a) Mild alkaline (b) Strongly Alkaline
 (c) Mild acidic (d) Strongly acidic
- 940. soil is suitable for cultivation of bidi tobacco cultivation**
 (a) Medium loams (b) Sandy loams
 (c) Heavy (d) Sandy to silt loams
- 941. soil is suitable for binder (cigar) tobacco cultivation**
 (a) Medium loams (b) Sandy loams
 (c) Heavy (d) Sandy to silt loams
- 942. soil is suitable for cigarette tobacco cultivation**
 (a) Medium loams (b) Light and Sandy soils
 (c) Heavy (d) Sandy to silt loams
- 943. soil is suitable for hookah tobacco cultivation**
 (a) Medium loams (b) Light and Sandy soils
 (c) Heavy (d) Sandy to silt loams
- 944. soil pH is most suitable for tobacco cultivation**
 (a) 6-7 (b) 7-8
 (c) 5-6 (d) 4-5
- 945. Optimum age of seedlings for transplanting *N. tabacum* tobacco is Weeks**
 (a) 6-7 (b) 7-8
 (c) 5-6 (d) 4-5
- 946. optimum age of seedlings for transplanting *N.rustica* tobacco is Weeks**
 (a) 6-7 (b) 7-9
 (c) 5-6 (d) 4-5
- 947. Heavy nitrogen application _____ of smoking type tobacco**
 (a) Increases yield and decreases quality
 (b) Increases quality and decreases yield
 (c) Increases both quality and yield
 (d) Decreases both quality and yield
- 948. Heavy nitrogen application of chewing and bidi type tobacco**
 (a) Increases yield and decrease quality
 (b) Increases quality and decreases yield
 (c) Increases both quality and yield
 (d) Decreases both quality and yield
- 949. Better quality of flue cured tobacco is obtained from**
 (a) Partially N starved plants
 (b) N sufficient plants
 (c) Excess N supplied plants
 (d) All of the above
- 950. Potash should never be supplied through to tobacco**
 (a) MoP (b) SoP
 (c) SSP (d) None of the above
- 951. Chloride application in tobacco**
 (a) Decreases quality (b) Increases quality
 (c) No effect on quality (d) None
- 952. Thick leaves and brostening of leaves in tobacco is due to**
 (a) Cl (b) Ca
 (c) Mg (d) B
- 953. Thin leaves in tobacco is due to deficiencies of**
 (a) Cl (b) Ca
 (c) Mg (d) B
- 954. Sand down tobacco is due to**
 (a) Cl (b) Ca
 (c) Mg (d) B
- 955. Thickening in lower leaves in tobacco is due to**
 (a) Cl (b) Ca
 (c) Mg (d) B
- 956. Transplanting of winter crop of tobacco is done in**
 (a) September-October
 (b) November-December
 (c) October-November
 (d) March-April
- 957. Transplanting of Summer crop of tobacco in done in**
 (a) May-June (b) February-March
 (c) November-December (d) March-April
- 958. is a total root parasite in tobacco**
 (a) Striga (b) Orobanche
 (c) Cuscuta (d) All
- 959. Pre planting application of EPTC@6kg/ha is recommended in tobacco for control of**
 (a) Striga (b) Orobanche
 (c) Cuscuta (d) All

- 960. The process of removal of flower heads with few upper leaves in tobacco**
 (a) Desuckering (b) Topping
 (c) Deheading (d) None of these
- 961. Topping results in improved**
 (a) Quality (b) Size
 (c) Texture (d) All of these
- 962. Topping results in diversion of energy and nutrients to**
 (a) Leaves (b) Stem
 (c) Fruits (d) Flowers
- 963. The effect of topping is more pronounced in**
 (a) Younger leaves (b) Middle
 (c) Older leaves (d) All the above
- 964. Topping of inflorescence is known as**
 (a) Topping high (b) Topping low
 (c) Topping full (d) None of these
- 965. Topping of inflorescence along with few leaves is known as**
 (a) Topping him (b) Topping low
 (c) Topping full (d) None of these
- 966. Branching in tobacco is due to**
 (a) Topping (b) Desuckering
 (c) Both (d) None of these
- 967. Removal of suckers in tobacco is known as**
 (a) Topping (b) Desuckering
 (c) Suckering (d) De-topping
- 968. To obtain the benefit of topping in tobacco Is necessary**
 (a) Topping (b) Desuckering
 (c) Suckering (d) All of the above
- 969. Desuckering is not required in type tobacco**
 (a) Bidi (b) Wrapper
 (c) Cigarette (d) Hookah
- 970. Use of on top 6 axils suppresses emergence of suckers**
 (a) NAA (b) MH
 (c) Coconut oil (d) None
- 971. Application of @2% suppresses the emergence of suckers in cheroot tobacco**
 (a) NAA (b) MH
 (c) Coconut oil (d) None of the above
- 972. Flue cured tobacco is raised with low level**
 (a) N (b) P
 (c) K (d) Cl
- 973. Flue cured tobacco is harvested by method**
 (a) Priming (b) Stock Cut
 (c) Both (d) None of the above
- 974. Which one of the following is not a stage of curing**
 (a) Yellowing (b) Fixing color
 (c) Hardening (d) Drying
- 975. Which of the following is air cured tobacco**
 (a) Wrapper (b) Chewing
 (c) Bidi (d) Cigarette
- 976. Which one of the following is fire cured tobacco**
 (a) Wrapper (b) Chewing
 (c) Bidi (d) Cigarette
- 977. Method of harvesting in tobacco is called**
 (a) Nipping
 (b) Priming
 (c) Striping
 (d) Reaping
- 978. Which one of the following is not a method of curing in tobacco**
 (a) Fire
 (b) Sun
 (c) Chemical
 (d) Air

Answer Key

1	a	46	d	91	d	136	a	181	a
2	d	47	d	92	d	137	d	182	a
3	d	48	d	93	d	138	d	183	a
4	d	49	d	94	c	139	d	184	b
5	c	50	d	95	d	140	d	185	b
6	a	51	d	96	d	141	d	186	b
7	b	52	d	97	d	142	d	187	b
8	b	53	d	98	d	143	a	188	a
9	a	54	d	99	b	144	a	189	a
10	b	55	d	100	d	145	d	190	c
11	a	56	d	101	d	146	d	191	c
12	a	57	d	102	a	147	d	192	a
13	a	58	d	103	b	148	d	193	c
14	d	59	a	104	b	149	a	194	d
15	c	60	a	105	d	150	c	195	d
16	b	61	b	106	a	151	c	196	c
17	a	62	b	107	c	152	b	197	c
18	d	63	d	108	b	153	d	198	a
19	a	64	d	109	d	154	a	199	d
20	d	65	d	110	c	155	d	200	c
21	d	66	d	111	d	156	b	201	b
22	d	67	d	112	d	157	a	202	b
23	a	68	d	113	c	158	a	203	a
24	d	69	d	114	d	159	b	204	d
25	a	70	d	115	d	160	c	205	a
26	d	71	d	116	a	161	a	206	a
27	c	72	d	117	a	162	b	207	c
28	c	73	d	118	a	163	b	208	b
29	b	74	d	119	d	164	b	209	d
30	b	75	d	120	a	165	a	210	a
31	a	76	d	121	a	166	b	211	c
32	d	77	d	122	a	167	a	212	a
33	a	78	c	123	d	168	d	213	b
34	d	79	d	124	c	169	c	214	a
35	d	80	d	125	d	170	b	215	a
36	b	81	d	126	d	171	b	216	b
37	d	82	d	127	d	172	b	217	b
38	a	83	d	128	d	173	b	218	a
39	d	84	a	129	c	174	d	219	d
40	d	85	d	130	c	175	a	220	a
41	b	86	c	131	a	176	b	221	a
42	a	87	d	132	d	177	a	222	c
43	b	88	d	133	d	178	c	223	a
44	d	89	d	134	d	179	b	224	a
45	a	90	d	135	d	180	c	225	a

226	a	271	a	316	b	361	b	406	b
227	c	272	b	317	a	362	c	407	d
228	d	273	c	318	a	363	a	408	c
229	c	274	c	319	b	364	c	409	c
230	b	275	b	320	b	365	b	410	a
231	b	276	b	321	b	366	d	411	b
232	c	277	b	322	b	367	b	412	a
233	c	278	c	323	b	368	c	413	a
234	c	279	c	324	d	369	a	414	b
235	a	280	a	325	a	370	b	415	a
236	d	281	d	326	d	371	d	416	a
237	d	282	b	327	c	372	c	417	c
238	c	283	b	328	a	373	b	418	d
239	a	284	b	329	a	374	c	419	c
240	b	285	c	330	d	375	b	420	d
241	a	286	d	331	d	376	a	421	b
242	c	287	d	332	a	377	a	422	c
243	a	288	c	333	a	378	b	423	c
244	c	289	d	334	b	379	c	424	d
245	c	290	a	335	b	380	a	425	a
246	c	291	b	336	a	381	a	426	c
247	b	292	b	337	b	382	c	427	d
248	a	293	c	338	c	383	b	428	c
249	b	294	a	339	d	384	c	429	c
250	d	295	a	340	a	385	a	430	c
251	d	296	b	341	a	386	b	431	d
252	b	297	a	342	a	387	a	432	a
253	d	298	b	343	d	388	a	433	b
254	c	299	c	344	a	389	b	434	a
255	c	300	a	345	b	390	a	435	d
256	d	301	a	346	a	391	d	436	c
257	c	302	a	347	b	392	c	437	c
258	c	303	a	348	c	393	a	438	b
259	c	304	c	349	a	394	d	439	a
260	a	305	b	350	c	395	a	440	a
261	c	306	b	351	c	396	a	441	c
262	b	307	a	352	d	397	a	442	c
263	b	308	b	353	a	398	d	443	a
264	c	309	a	354	a	399	c	444	b
265	a	310	b	355	b	400	d	445	a
266	a	311	a	356	c	401	b	446	b
267	a	312	a	357	a	402	b	447	d
268	a	313	a	358	b	403	a	448	b
269	a	314	a	359	d	404	a	449	c
270	a	315	a	360	d	405	c	450	c

451	a	496	d	541	b	586	a	631	d
452	c	497	d	542	c	587	c	632	d
453	b	498	d	543	b	588	a	633	c
454	a	499	d	544	d	589	a	634	d
455	c	500	d	545	d	590	a	635	b
456	a	501	c	546	d	591	a	636	b
457	c	502	a	547	a	592	d	637	a
458	c	503	b	548	b	593	d	638	a
459	a	504	c	549	b	594	b	639	a
460	a	505	c	550	c	595	b	640	a
461	a	506	a	551	d	596	a	641	a
462	a	507	c	552	d	597	b	642	c
463	a	508	a	553	c	598	b	643	c
464	a	509	b	554	d	599	c	644	d
465	a	510	b	555	d	600	c	645	c
466	b	511	a	556	d	601	d	646	b
467	d	512	d	557	d	602	c	647	a
468	c	513	c	558	c	603	b	648	a
469	a	514	d	559	a	604	c	649	a
470	b	515	b	560	d	605	d	650	c
471	d	516	c	561	d	606	b	651	a
472	a	517	d	562	c	607	a	652	c
473	a	518	a	563	d	608	b	653	b
474	b	519	d	564	d	609	b	654	a
475	c	520	a	565	c	610	b	655	b
476	b	521	c	566	b	611	d	656	a
477	d	522	b	567	d	612	a	657	c
478	d	523	b	568	a	613	b	658	d
479	b	524	c	569	c	614	a	659	a
480	d	525	d	570	c	615	a	660	a
481	b	526	a	571	b	616	b	661	b
482	c	527	c	572	c	617	c	662	c
483	c	528	d	573	b	618	d	663	a
484	a	529	c	574	b	619	c	664	c
485	a	530	d	575	c	620	b	665	b
486	b	531	d	576	b	621	d	666	d
487	c	532	d	577	d	622	c	667	c
488	d	533	d	578	c	623	d	668	a
489	d	534	d	579	b	624	b	669	a
490	a	535	a	580	c	625	c	670	c
491	c	536	b	581	c	626	d	671	d
492	d	537	a	582	d	627	a	672	d
493	a	538	b	583	c	628	a	673	a
494	d	539	c	584	d	629	a	674	d
495	d	540	b	585	b	630	a	675	c

676	a	721	c	766	b	811	a	856	b
677	c	722	a	767	b	812	a	857	b
678	d	723	d	768	d	813	a	858	c
679	b	724	a	769	b	814	d	859	d
680	b	725	c	770	a	815	a	860	c
681	c	726	d	771	a	816	b	861	c
682	a	727	b	772	c	817	b	862	a
683	c	728	a	773	d	818	b	863	c
684	d	729	a	774	a	819	b	864	c
685	a	730	c	775	b	820	d	865	a
686	a	731	b	776	a	821	b	866	a
687	b	732	c	777	b	822	a	867	a
688	a	733	d	778	a	823	c	868	a
689	a	734	a	779	c	824	c	869	a
690	b	735	a	780	b	825	b	870	d
691	a	736	c	781	b	826	d	871	a
692	c	737	b	782	a	827	c	872	a
693	c	738	a	783	a	828	a	873	a
694	c	739	a	784	b	829	b	874	a
695	d	740	a	785	b	830	b	875	d
696	b	741	a	786	b	831	a	876	a
697	c	742	b	787	b	832	c	877	a
698	c	743	d	788	b	833	a	878	a
699	d	744	d	789	a	834	b	879	c
700	d	745	d	790	d	835	b	880	c
701	c	746	d	791	a	836	a	881	b
702	a	747	b	792	b	837	b	882	d
703	d	748	a	793	b	838	c	883	a
704	d	749	c	794		839	c	884	a
705	c	750	b	795	c	840	b	885	c
706	b	751	b	796	b	841	d	886	c
707	b	752	c	797	b	842	a	887	c
708	c	753	c	798	b	843	b	888	a
709	d	754	a	799	b	844	a	889	b
710	d	755	a	800	a	845	c	890	d
711	c	756	d	801	a	846	a	891	b
712	b	757	a	802	c	847	c	892	c
713	c	758	c	803	c	848	b	893	c
714	c	759	a	804	b	849	d	894	b
715	b	760	c	805	a	850	d	895	a
716	a	761	d	806	c	851	b	896	c
717	c	762	c	807	a	852	b	897	a
718	b	763	b	808	a	853	a	898	c
719	c	764	c	809	b	854	d	899	a
720	c	765	d	810	b	855	b	900	a

901	c	941	b
902	d	942	b
903	a	943	d
904	a	944	c
905	b	945	c
906	b	946	b
907	c	947	a
908	c	948	c
909	a	949	a
910	a	950	b
911	d	951	a
912	a	952	a
913	b	953	b
914	b	954	c
915	a	955	d
916	c	956	b
917	a	957	d
918	c	958	b
919	b	959	d
920	d	960	b
921	b	961	d
922	a	962	a
923	b	963	a
924	d	964	b
925	d	965	a
926	a	966	a
927	c	967	b
928	c	968	b
929	a	969	c
930	c	970	b
931	a	971	a
932	c	972	a
933	b	973	c
934	d	974	a
935	c	975	b
936	a	976	b
937	c	977	b
938	a	978	c
939	c		
940	b		