

Choose the Correct Answer from the Multiple Choices (A, B, C and D)

- 1 Which one is true?
 (A) The floor of cow stall should be such that animals can slip on it.
 (B) The surface of the floor may be left rough but it should not accumulate water on it.
 (C) The surface of the floor may be left rough but it should accumulate water on it.
 (D) All the above
- 2 In a stall barn, the floor area (in m²) required for each cow is:
 (A) 3.5 to 5.5 (B) 5.5 to 7.5
 (C) 7.6 to 9.5 (D) 9.6 to 11.6 (GATE 1999)
- 3 The maximum length of stall barn to house 72 cows should be:
 (A) 33 m (B) 40 m (C) 50 m (D) 100 m (GATE 1987)
- 4 In which type of barn, the cows are housed and milk in the same building:
 (A) Loose housing barn (B) Open air barn
 (C) Stanchion barn (D) None of the above
- 5 The average size of a bull shed is:
 (A) 15 m x 10 m (B) 10 m x 20 m (C) 10 m x 5 m (D) 15 m x 15 m
- 6 Mangers used in barns should have width ranging from:
 (A) 5-10 cm (B) 25-30 cm (C) 40-50 cm (D) 75-90 cm
- 7 The type of barn in which the cows are housed and milk in the same building is known as:
 (A) Loose housing barn (B) Stanchion barn
 (C) Open air barn (D) All the above

- 8 The height of walls running along the dairy barn length may be about:
 (A) 1.8 m (B) 2.1 m (C) 2.4 m (D) 3.0 m
- 9 Common type of barn on modern dairy farms having large herds is:
 (A) Stanchion barn (B) Loose housing barn
 (C) Open air barn (D) Milking parlor (ASRB)
- 10 The passage between outer wall and manger used to move push cart containing silage is called:
 (A) Feed alley (B) Trench (C) Cart-way (D) Pen-alley
- 11 The gutters in the stanchion barn usually have dimensions of:
 (A) 40 cm x 15 cm (B) 42 cm x 12 cm
 (C) 45 cm x 15 cm (D) 45 cm x 12 cm
- 12 The requirement of floor space per cow in stall barn system of housing is:
 (A) 3.2-5.4 sq m (B) 5.5-7.5 sq m (C) 7.2-8.4 sq m (D) 8.4-9.4 sq m
- 13 How much area (sq. ft.) is considered sufficient and economical for housing dairy animal comfortably?
 (A) 20-25 (B) 25-30 (C) 30-35 (D) 35-40
- 14 If gable roof is used in dairy barn, the maximum height of ceiling may vary between:
 (A) 5 m to 5.5 m (B) 5.5 m to 6.0 m
 (C) 4.5 m to 5.0 m (D) None of the above
- 15 The back of the manger is about _____ above the floor:
 (A) 40 cm (B) 50 cm (C) 60 cm (D) 80 cm
- 16 Labour requirement is more in:
 (A) Loose housing barn (B) Stanchion barn
 (C) Open air barn (D) All of the above
- 17 The loose housing barn is one in which the cows are housed in a covered yard and:
 (A) They are also milked there
 (B) They are also milked in batches in the milking parlor
 (C) They are milked in separate area
 (D) They are not milked there (GATE 1987)
- 18 Which type of housing is cheaper?
 (A) Loose housing barn (B) Stanchion barn
 (C) Both has the same cost (D) None of the above
- 19 In which type of barn, the cows are housed in a covered or partially covered yard, but they are milked in batches in a milking parlor:
 (A) Loose housing barn (B) Stanchion barn
 (C) Open air barn (D) All of the above

- 0 In a dairy barn, the manger is meant for:
 (A) Breeding the cattle (B) Feeding the cattle
 (C) Rearing of the calf (D) Storing the feed for the long period
 (GATE 1998)
- 21 The floor space required per cow both for loafing as well as for feeding in loose housing barn is:
 (A) 9 to 11 sq m (B) 11 to 12 sq m (C) 6 to 8 sq m (D) 12 to 14 sq m
- 22 Following arrangement has common manger:
 (A) Face in (B) Face out (C) Stall type (D) None of the above
- 23 Two row barn with either face in or face out arrangement may be selected for:
 (A) 6 or more cows (B) 8 or more cows
 (C) 10 or more cows (D) 12 or more cows
- 24 Which type of barn is preferred for milking animals and also whenever the barn is to be enclosed?
 (A) Face in (B) Face out
 (C) Either 'Face in' or 'Face out' (D) None of the above
- 25 The milk house should be separated from dairy barn by at least _____ long paved passage:
 (A) 6m (B) 4m (C) 8m (D) 10m
- 26 Face out type stanchion barn is commonly built _____ wide, with sufficient length to accommodate all the animals:
 (A) 8 to 9m (B) 9 to 10m (C) 10 to 11m (D) 11 to 12m
- 27 The percent saving of floor area of barn for 'Face in' type barn as compared to the 'Face out' type stanchion barn is:
 (A) 10 (B) 20 (C) 25 (D) 30
- 28 Gutters in stanchion barn are usually 45 cm wide and _____ deep:
 (A) 15cm (B) 20cm (C) 25cm (D) 30cm
- 29 The width of feed alley in stanchion type dairy barn is:
 (A) 0.4m (B) 0.8m (C) 1.0m (D) 1.2m
- 30 The minimum slope which should be provided in the gutter so that there is unrestricted flow of drainage water into manure pit outside the barn:
 (A) 2% (B) 2.5% (C) 3.0% (D) 3.5%
- 31 In a deep litter poultry house, the floor area provided per bird is usually:
 (A) 3600 sq. cm (B) 100 sq. cm (C) 2250 sq. cm (D) 5000 sq. cm
- 32 Floor area required per hundred adult hens:
 (A) 30-42 m² (B) 7-17 m² (C) 17-27 m² (D) 42-50 m²
- 33 The dimensions (in cm × cm × cm) of a cage to house one bird may be:
 (A) 20 × 10 × 50 (B) 30 × 10 × 50 (C) 60 × 20 × 45 (D) 30 × 20 × 45

- 34 Cage houses for poultry are generally built in:
 (A) Cold regions (B) Moderate regions
 (C) Warm regions (D) None of the above
- 35 Which type of fencing is cheaper?
 (A) Woven wire (B) Plain wire
 (C) Barbed wire (D) The cost of all the above are same
- 36 In deep litter system, how many birds can be accommodated in $2.4\text{m} \times 2.4\text{m}$ space?
 (A) 12 (B) 14 (C) 16 (D) 18
- 37 The depth of litter in the deep litter poultry housing is within:
 (A) 10-15 cm (B) 15-20 cm (C) 20-25 cm (D) 25-30 cm (ASRB)
- 38 On an average a hen requires floor area of (sq. ft.)
 (A) 2.0 (B) 2.5 (C) 3.0 (D) 3.5
- 39 In wire floored poultry houses, bird takes rest in horizontally placed known as:
 (A) Perches (B) Cages (C) Nests (D) Roosts
- 40 Normal weight of an egg in grams is:
 (A) 50-60 (B) 60-70 (C) 70-80 (D) 80-90
- 41 In a deep litter poultry house, the floor area provided per bird is usually:
 (A) 0.1 m^2 (B) 0.4 m^2 (C) 1.0 m^2 (D) 1.4 m^2 (GATE 1996)
- 42 The floor area (m^2) per head in a deep litter poultry house is:
 (A) 0.1 (B) 0.4 (C) 0.8 (D) 1.2 (GATE 1990)
- 43 Cage type poultry houses are preferably used for:
 (A) Layers (B) Boilers (C) New born chicks (D) All the above
- 44 Which type of fencing is commonly used for poultry housing?
 (A) Plain wire (B) Barbed wire (C) Hexagonal wire (D) Electrical
- 45 Deep litter poultry housing has a litter of depth:
 (A) 5 cm (B) 20 cm (C) 30 cm (D) 40 cm
- 46 Floor space required per bird for small sized birds when 100 birds are kept in a poultry house is:
 (A) 0.27 (B) 0.32 (C) 0.37 (D) 0.42
- 47 Which type of housing offers an excellent opportunity for the birds to burrow in it when the air temperature is high, and thereby cool themselves:
 (A) Wire floored poultry housing (B) Cage house
 (C) Deep litter poultry housing (D) All the above
- 48 Floor space required per bird for large sized birds when 100 birds are kept in a poultry house is:
 (A) 0.27 (B) 0.32 (C) 0.37 (D) 0.42

- 49 The litter in deep litter poultry housing can be kept dry by:
 (I) Keeping the right number of birds
 (II) Raising floor level higher than its surroundings
 (III) Not allowing the rain water to enter through roof or side walls
 (IV) Keeping the watering trough at suitable points so as to avoid spillage of drinking water on the floor
 (A) Only (IV) is correct
 (B) Only (III) & (IV) are correct
 (C) Only (II), (III) & (IV) are correct
 (D) All are correct
- 50 The overall dimensions of wire floored poultry house of 400 birds having a service alley of 1.8 m width in the middle of the house is:
 (A) 20×5.5 m
 (B) 23×5.5 m
 (C) 23×4.5 m
 (D) 25×5.5 m
- 51 The dimensions of cage house to house one bird may be:
 (A) $0.6 \times 0.2 \times 0.45$ cm
 (B) $0.6 \times 0.25 \times 0.45$ cm
 (C) $0.8 \times 0.3 \times 0.4$ cm
 (D) $0.8 \times 0.4 \times 0.45$ cm
- 52 Average daily water consumption of 100 poultry birds will be:
 (A) 30 liters
 (B) 40 liters
 (C) 50 liters
 (D) 60 liters
- 53 The average size of brooder house is:
 (A) 3×3 m
 (B) 3.75×3 m
 (C) 4.25×4 m
 (D) 3.5×3.5 m
- 54 The term ewe refers to:
 (A) Female sheep
 (B) Female goat
 (C) Male sheep
 (D) Male goat
- 55 Generally a cow of 100 kg body weight is fed silage about:
 (A) 3 kg/day
 (B) 6 kg/day
 (C) 9 kg/day
 (D) 12 kg/day
- 56 Cows should be fed silage per day at the rate with respect to body weight:
 (A) 2%
 (B) 3%
 (C) 4%
 (D) 6%
- 57 A herd of 100 dairy cows is fed 1300 kg of silage daily. The thickness of silage fed each day is 100 mm. If one m^3 of silage weighs 650 kg, the diameter of pit silo will be:
 (A) 4.54 m
 (B) 5.04 m
 (C) 5.64 m
 (D) 6.04 m (GATE 2002)
- 58 Trench silo has:
 (A) Circular cross-section
 (B) Trapezoidal cross-section
 (C) Rectangular cross-section
 (D) Triangular cross-section
- 59 If silage is to be fed 150 days per year and rate of feeding is 10 cm/day, depth of silo should be:
 (A) 10m
 (B) 15m
 (C) 20m
 (D) 30m
- 60 Which of the following is not a type of horizontal silo?
 (A) Surface
 (B) Pit
 (C) Trench
 (D) All are types of horizontal silo

61. Cow is fed about _____ of silage per 100 kg of her body weight per day:
 (A) 1 kg (B) 2 kg (C) 3 kg (D) 4 kg
62. A normal silage ration (kg per cow per day) is:
 (A) 4 to 8 (B) 8 to 12 (C) 12 to 14 (D) 14 to 18
63. The diameter of pit silo is limited to:
 (A) 3 m (B) 4m (C) 5m (D) 6m
64. To prevent spoilage, silage should be removed at the rate of:
 (A) 5 cm/day (B) 10 cm/day (C) 15 cm/day (D) 20 cm/day
65. Pit silos have:
 (A) Rectangular cross-section (B) Circular cross-section
 (C) Trapezoidal cross-section (D) None of the above
66. From the management point of view, the farm stead should be located:
 (A) Near the centre of the farm (B) On one side of the farm
 (C) Near a well in the farm (D) None of the above (GATE 1987)
67. The minimum diameter of a manhole opening is:
 (A) 10 cm (B) 20 cm (C) 30 cm (D) 50 cm
68. In electrical fencing, from the point of view of safety, the circuit may be kept on and off respectively for about:
 (A) $\frac{1}{5}$ and $\frac{2}{5}$ s (B) $\frac{1}{3}$ and $\frac{3}{5}$ s (C) $\frac{1}{10}$ and $\frac{4}{5}$ s (D) None of the above
69. A farmstead demanding a maximum of about 40,000 liters of water per hour for two hours during noon and only about 25,000 liters per hour during rest of the period. The tube well is capable of supplying at the rate of only 28,000 liters per hour. The size of the overhead water tank in liters will be:
 (A) 9000 (B) 24000 (C) 74000 (D) 37000
70. The thickness of barbed wire which is used for fencing is:
 (A) 10 gauge (B) 12 gauge (C) 14 gauge (D) 16 gauge
71. Thickness of walls of reinforced concrete water tank should not be less than:
 (A) 10 cm (B) 15 cm (C) 18 cm (D) 20 cm
72. Water that contains substances which are undesirable for drinking is called:
 (A) Contaminated water (B) Polluted water
 (C) Dirty water (D) Potable water
73. Water free from impurities may be obtained from:
 (A) Well (B) River
 (C) Lake (D) Spring along the hill slope

74. The basis for the design of water distribution system for a place is:
 (A) Maximum weekly consumption
 (B) Average annual consumption
 (C) Peak hourly consumption
 (D) Peak hourly consumption plus the fire demand
75. A water supply scheme is usually designed for:
 (A) 25 years (B) 50 years (C) 75 years (D) 100 years
76. Which source gives surface water?
 (A) Tube wells (B) Lakes (C) Rain (D) Springs
77. Disinfection of drinking water involves removal of:
 (A) Bacteria (B) Turbidity (C) Odor (D) Color
78. The main disadvantage of hard water is:
 (A) Bad taste (B) Foul smell
 (C) More turbidity (D) Increased soap consumption
79. For removal of temporary hardness of water:
 (A) Alum is added to water (B) Lime is added to water
 (C) Water is filtered (D) Water is boiled
80. Yield of a well is:
 (A) Water available continuously for one year
 (B) Water that can be drawn in 24 hours
 (C) The maximum amount of water available
 (D) The maximum amount of water that can be continuously drawn with fixed depression
81. Potassium permagnate is used for:
 (A) De-chlorination (B) Improving color
 (C) Removing organic matter (D) Reducing hardness
82. The fan-pad system of green house cooling can lower the temperature of incoming air by about _____ of the difference between the dry bulb and wet bulb temperatures, while the fog cooling system can lower the temperature by nearly 100% of difference:
 (A) 70% (B) 80% (C) 90% (D) 100%
83. When THI reaches 79, the percent of people feel uncomfortable are:
 (A) 100% (B) 90% (C) 80% (D) 70%
84. The human body in a cooled space constitutes cooling load of:
 (A) Sensible heat only (B) Latent heat only
 (C) Sensible heat and latent heat (D) Vaporization heat
85. The average capacity (cubic meter) of septic tank should not be less than:
 (A) 2.5 (B) 2.1 (C) 2.03 (D) 2.01

86. Sludge from septic tank should be removed in:
 (A) 1 or 2 years (B) 4 years (C) 3 years (D) 5 years
87. For average family size of 2 adults and 3 children, septic tank capacity should be:
 (A) 2.5 m^3 (B) 2.6 m^3 (C) 2.7 m^3 (D) 2.8 m^3
88. The traditional green house glazing material all over the world is:
 (A) Glass (B) Plastic (C) Film (D) All the above
89. The volume of standard brick is:
 (A) $2.178 \times 10^{-3} \text{ cu m}$ (B) $2.378 \times 10^{-3} \text{ cu m}$
 (C) $2.578 \times 10^{-3} \text{ cu m}$ (D) $2.778 \times 10^{-3} \text{ cu m}$ (ASRB)
90. Which is the weakest concrete?
 (A) 1 : 2 : 4 (B) 1 : 3 : 6 (C) 1 : 4 : 8 (D) 1 : 5 : 10
91. Fire bricks are used:
 (A) To reflect heat (B) To protect building against fire
 (C) To increase heat flow (D) To decrease heat flow
92. Slump test for concrete is carried out to determine:
 (A) Durability (B) Strength (C) Water content (D) Workability
93. The properties of first class brick are:
 (A) Clean and even surface but not smooth
 (B) Dull sound
 (C) Crushing strength in between 35 to 75 kg/cm^2
 (D) A little large voids (GATE 1989)
94. A masonry foundation having 3000 kg of dead load per running meter of the wall. Assuming that the building has to be constructed in alluvial soil of India having the bearing pressure as $5 \times 10^3 \text{ kg/m}^2$. The width of the masonry foundation will be:
 (A) 1.33 m (B) 6 m (C) 13.3 m (D) 0.6 m
95. A 3-ply plywood may have thickness of:
 (A) 12–15 mm (B) 9–12 mm (C) 6–10 mm (D) 3–6 mm
96. Moment of inertia of square section of a beam having side of B :
 (A) $B^3/6$ (B) $B^3/12$ (C) $B^4/12$ (D) $B^4/6$
97. For the RCC construction of water retaining structures, the grade concrete mix used is generally:
 (A) 1 : 2 : 4 (B) 1 : 1 : 2 (C) $1 : 1\frac{1}{2} : 3$ (D) 1 : 2 : 2
98. UV stabilized polyethylene, on an average, transmits about _____ of photo- synthetically active radiation (PAR) into the green house:
 (A) 80% (B) 85% (C) 75% (D) 87%

99. Allowable stress (P/A) is given by the column formula:
 (A) $\frac{\pi^2 E}{(l/r)^2}$ (B) $\frac{\pi^2 E}{(l/r)}$ (C) $\frac{\pi^2 E}{l^2/r}$ (D) None of the above (ASRB)
100. Slenderness ratio for a column is given by:
 (A) $\frac{2l}{d}$ (B) $\frac{l}{2d}$ (C) $\frac{1}{d}$ (D) $\frac{l^2}{d}$ (ASRB)
101. Quantities of ingredients of a concrete mix are calculated by Fuller's rule, expressed as:
 (A) $C = \frac{1.55}{c+s+r}$ (B) $C = \frac{42}{c+s+r}$ (C) $C = \frac{2.55}{c+s+r}$ (D) None of the above (ASRB)
102. Each standard cement bag has a volume of:
 (A) 0.032 cu meter (B) 0.035 cu meter (C) 0.036 cu meter (D) 0.038 cu meter
103. The life of best quality ultraviolet (UV) stabilized film when used as greenhouse covering material is:
 (A) Two years (B) Three years (C) Four years (D) Five years
104. The thickness of most widely used glass as green house covering material is:
 (A) 2 mm (B) 3 mm (C) 4 mm (D) 5 mm
105. Which one of the following is not the common size of steel bar?
 (A) 16 mm (B) 20 mm (C) 22 mm (D) 28 mm
106. Which one of the following is not the standard length of asbestos cement corrugated sheets?
 (A) 1.5 m (B) 1.75 m (C) 2.0 m (D) 2.5 m
107. The comfort condition in air conditioning is at:
 (A) 10°C DBT and 50% RH (B) 20°C DBT and 60% RH
 (C) 30°C DBT and 80% RH (D) 40°C DBT and 90% RH
108. When water is added to cement:
 (A) Chemical reaction starts (B) Heat is absorbed
 (C) Heat is generated (D) None of the above
109. Full strength of concrete is achieved after (days):
 (A) 7 (B) 14 (C) 21 (D) 28
110. For slabs and beams, the grade of concrete mix generally used is:
 (A) 1 : 2 : 4 (B) 1 : 3 : 6 (C) 1 : 4 : 8 (D) 1 : 5 : 10
111. During heating and humidification process:
 (A) Dry bulb temperature increases (B) Humidity ratio increase
 (C) Enthalpy increases (D) All the above
112. Low temperature during concrete lying:
 (A) Decreases strength (B) Increases strength
 (C) Has no effect on strength (D) None of the above