

## Multiple Choice Questions

**Subject: Tractor and Farm Machinery Operation and Maintenance BTAF32102 (0+2)**

1. Piston displacement is the volume displaced by the piston during one stroke and is usually expressed in  
1. Cubic meter 2. cubic inches 3. Both of these 4. none of these  
ans-1
2. If piston displacement is deducted from the total volume of cylinder the remaining volume is known as  
1. piston displacement 2. Clearance volume 3. displacement volume 4. compression ratio  
ans 2
3. Which of the following types of internal combustion engine is generally used as portable engine for pumping and electricity generation?  
1. Spark ignition 2. Stationary 3. Vertical single cylinder 3. all of these  
ans 2
4. Heavy smoking in an engine in operation may be due to  
1. Overloading 2. Mixtures 3. Late injection 4. all of these  
ans 4
5. In tractor transmission oil and oil from the steering worm and sector housing should be changed after how many working hours?  
1. 450 2. 550 3. 650 4. 750  
ans 4
6. One hp is equal to  
1. 246watts 2. 250 watts 3. 746watts 4. 1000watts  
ans 3
7. in four stroke engine there is one power stroke for every \_\_\_\_ revolutions' of the cranks shaft  
a. 1 b. 2 c. 3 d.4  
ans b
8. Which of the following is a device used on a tractor or stationary engine for maintaining nearly constant engine speed under varying loads?  
1. Volatility of fuel 2. Governor 3. Pre-ignition 4. carburetor  
ans 2
9. The violent noises heard in an engine during the process of combustion after the position has passed over the top dead center is known as?

1. Stationary 2. Spark ignition 3. Detonation 4. all of these  
ans 3

10. Tractor engine oil should be changed and all grease points should be lubricated after every \_\_\_ working hrs

1. 15 2. 30 3. 60 4. 120

ans 4

11. In tractor engine the complete path of power from the engine to the wheel is called

1. Power train 2. Power wheel 3. Both 1 and 2 4. none of these

ans 1

12. The hp available at the crank shaft which is measured by a suitable dynamometer is called

1. IMEP 2. BHP 3. Both 1 and 2 4. none of these

ans 2

13. In tractor engine which of the following is a device in which liquid fuel is converted into gaseous fuel?

1. Piston 2. Carburetor 3. Both 1 and 2 4. none of these

ans 1

14. Optimum engine temp is about how many degree

1. 60 2. 82 3. 100 4. 120

ans 2

15. Maximum torque in a tractor is generated at

1. Rated rpm 2. Less than rated rpm 3. Rated hp 4. maximum idling

ans 2

16. The injection pressure of ic engine used on tractors is in range of \_\_\_ kg/cm<sup>2</sup>

1. 0-6 2. 60-120 3. 120-200 4. 200-300

ans 3

17. Turbochargers are driven by

1. Engine 2. Exhaust gas 3. Dynamo 4. PTO

ans 2

18. The device for engaging and disengaging the power shaft from the gearbox is known as

1. shaft 2. Gear 3. Clutch 4. circuit

ans 3

19. Which of the following is not a hand tool?

1. Mould Board

2. Shovel

3. Spade
  4. Mamaunty
- ans-1

20. Which of the following is not a tractor drawn tillage tool?

1. Cultivator
2. Augar plough
3. Harrow
4. Plank

ans-4

21. Which one of the following is not a secondary tillage tool?

1. Disc Plough
2. Disc harrow
3. Mould Board
4. none of these

ans 3

22. Which of the following is not a tractor drawn primary tillage tool?

1. Disc plough
2. rotavator
3. Country plough
4. Bar harrow

ans 3

23. Which of the following farming is a replacement of human and animal power by mechanical power for different farm operation?

1. Mechanized farming
2. Mixed farming
3. Both of these
4. none of these

ans 1

24. The application of plastic mulch?

1. Reduces the surface evaporation
2. Increases the yield of cabbage crop moisture
- 3.both of these
4. none of these

ans 3

25. Power tillers operate most satisfactory with?

1. Rotary tillage
2. Plough
3. Transport carts
4. reapers

ans 1

26. Vertical section of plough influences

1. Pulverization
2. Depth of cut
3. Width of cut
4. direction of pull

ans 2

27. Dead furrow is made by

1. One way MB plough
2. 2 way MB plough
3. ridger
4. disc harrow

ans 1

28. A thresher causes more seed damage if

1. Speed is increased
2. Clearance is increased
3. Feed rate is reduced
4. speed is reduced

ans 1

29. The two primary tillage equipments are

1. MB and disc harrow
2. Disc plough and disc harrow
3. Disc harrow and cultivator
4. MB and subsoiler

ans 4

30. The mowers are designed to cut

1. Wheat
2. Paddy
3. Mustard
4. grasses

ans 4

31. The two types of cylinders used on power wheat threshers are

1. Serrated disc and rasp bar
2. gears and belt pulleys
3. belt pulleys and chains
- 4 none of the above

ans 2

32. The two types of cylinders used on power wheat threshers are

1. Serrated disc and rasp bar
2. Spike tooth and wire loop type
3. Spike tooth and hammer mill

4. hammer mill and flails

ans 3

33. Weight transfer in a tractor in a tractor implement system is caused by

1. Application of pull
2. Tractor force
3. Tractor slip
4. Weight of operator

ans 1

34. Notched disc blades on disc harrows are provided to

- a) Enhance penetration
- b) Improve balancing of gangs
- c) Save on steel
- d) Reduce draft

Ans. a

35 ULV spraying is used for

- a) Minimizing drift
- b) Reduce application rate
- c) Aerial spraying
- d) Spot application

Ans. b

36 Registration of a cutter bar means

- a) Centre of knife must stop in the centre of guard on each stroke
- b) Centre of knife should be ahead of guard
- c) Centre of knife should be behind the guard
- d) Centre of knife should be at the end of the guard

Ans. a

37 The width of seed drill with 9 tynes, each spaced at 20 cm is

- a) 160 cm
- b) 180 cm
- c) 200 cm
- d) 220 cm

Ans. b

38 A flat fan nozzle is suitable for

- a) Foliage spray
- b) Insect control
- c) Spot spray
- d) Herbicide spray

Ans. d

39 A furrow cross-section in a country plough is commonly

- a) Circular
- b) Triangular
- c) Rectangular
- d) Trapezoidal

Ans. b

40 The potential difference across the gap of a spark plug ranges between

- a) 10-20 mV
- b) 10-20 V
- c) 10-20 kV
- d) 10-20 MV

Ans. a

41 The electrolyte in a lead-acid battery is

- a) H<sub>2</sub>SO<sub>4</sub>
- b) HNO<sub>3</sub>
- c) HCl
- d) NaCl

Ans. a

42 Differential lock in tractor is used to improve

a) Lateral stability b) Braking performance c) Hydraulic lift d) Traction of a wheel

Ans. d

43 The use of pressurized radiator cap is to

- a) Reduce evaporation loss
- b) Increase engine operating temperature
- c) Increase boiling point of water
- d) Reduce heat losses

Ans. c

44 47. Choke in a I.C. engine is used to control

- a) Camshaft speed b) Specific fuel consumption c) Air fuel mixture d) Crankshaft speed

Ans. c

45 Puddling is used to

- a) Reduce percolation of water b) Pulverize soil c) Level the field d) Compact the soil

Ans. a

46 A tractor seat suspension should have its natural frequency in the range of

- a) 0.5 to 2.0 Hz b) 2.0 to 4.0 Hz c) 4.0 to 6.0 Hz d) 6.0 to 8.0 Hz

Ans. a

47 Castor angle is essentially related to

- a) Drive wheels b) Steered wheels c) Towed wheels d) Self-propelled wheels

Ans. b

48 Shortening of top link of tractor three-point hitch system

- a) Increases weight transfer on rear wheels
- b) Decreases weight transfer on rear wheels
- c) Increases penetration of implement
- d) Decreases penetration of implement

Ans. d

49 The penetration of a tandem disc harrow can be increased by

- a) Increasing tilt angle
- b) Increasing disc angle
- c) Increasing disc diameter
- d) All of the above

Ans.c

50 Penetration of a trailed type disc harrow is not affected by

- a) Size of disc b) Angle of disc c) Weight of disc d) Tractor hydraulic system

Ans. d

51 The draft of a trailed type implement can be measured using

- a) Brake dynamometer b) Torque meter c) Tension dynamometer d) Dial gauge

Ans. c

- 52 In a flail harvester, the cutting operation is performed by
- a) Horizontally rotating circular blades
  - b) Vertically rotating circular blades
  - c) Knives mounted on a horizontal shaft
  - d) Knives mounted on a vertical shaft

Ans. c

- 53 The adjustment in MB plough for increasing the depth of operation
- a) Vertical suction
  - b) Horizontal suction
  - c) Gang angle
  - d) Disc angle

Ans. a

- 54 Working width of disc plough can be increased by
- a) Disc angle
  - b) Gang angle
  - c) Vertical suction
  - d) Horizontal clearance

Ans. a

- 55 In a thresher, by increasing the speed of threshing cylinder
- a) Threshing efficiency can be increased
  - b) Broken grain loss can be minimized
  - c) Un-threshed grains can be increased
  - d) Straw breakup can be increased

Ans. a

- 56 In a sprayer overlapping can be increased by increasing
- a) Nozzle diameter
  - b) Pressure
  - c) Discharge
  - d) Height of nozzle

Ans. d

- 57 Name of instrument used for testing of spray nozzle
- a) Patternator
  - b) Aerometer
  - c) Galvanometer
  - d) Piezometer

Ans. a

- 58 Correcting the seed rate is known as
- a) Standardization
  - b) Filtration
  - c) Calibration

d) Testing

Ans. c

- 59 The seed rate can be increased by
- a) Decreasing the exposure length
  - b) Increasing the exposure length
  - c) Increasing speed
  - d) Decreasing speed

Ans. b

- 60 Seed drill uniformity can be measured by
- a) Number of seed per rotation of metering unit
  - b) Spacing between seeds
  - c) a and b both
  - d) none of these

Ans. c

- 61 seed drill can be tested by
- a) sand bed method
  - b) sticky belt methods
  - c) both
  - d) none of these

Ans. c

- 62 cutter bar knife
- a) triangular shape
  - b) square shape
  - c) trapezoidal shape
  - d) curved shape

Ans. c

- 63 pressure should be less in rear wheel as compare to front wheel because of
- a) high traction
  - b) low draft
  - c) high draft
  - d) none of these

Ans. a

- 64 pressure should be high in front wheel of the tractor because of
- a) high slippage
  - b) low slippage
  - c) high traction
  - d) easy steer ability

Ans. d

- 65 The battery has following three major functions to perform:



- a) To provide a source of current for engine starting, lighting and use of horn.
- b) To help control the voltage in the electrical system.
- c) To store the current produced by dynamo/alternator and to furnish the current
- d) all of the above.

Ans. d

66 The tillage pattern are

- a) Head land pattern
- b) Gathering
- c) Casting
- d) All of these

Ans. d

67 The function of landside in mb plough is to

- a) Resist the side draft force
- b) Increase pulverization
- c) Decrease draft
- d) All of these

Ans. a

68 The slat type mold board is used in

- a) Sticky soil
- b) Hard soil
- c) Loose soil
- d) Stony and trashy soil

Ans. a

69 Sod bottom mold board is used where

- a) Pulverization is needed
- b) Inversion is needed
- c) Both
- d) None of these

Ans. b

70 Stubble bottom mold board is used where

- a) Pulverization is needed
- b) Inversion is needed
- c) Both
- d) None of these

Ans. a

71 In comparison to MB plough, the draft is less in disc plough because

- a) It roll over the soil instead of sliding
- b) It has lower contact area
- c) It has larger cutting edge
- d) None of these

Ans. a

- 72 Registration of cutter bar is
- a) Aligning centers of guard and knife
  - b) Keeping cutter bur in 88 degrees
  - c) Both
  - d) None of these

Ans. a

- 73 Alignment of cutter bar is
- a) Aligning centers of guard and knife
  - b) Keeping cutter bur in 88 degrees
  - c) Both
  - d) None of these

Ans. b

- 74 While increasing the forward speed of the combine harvester speed of reel should be
- a) Increased in same ratio
  - b) Decreased in same ratio
  - c) No changes
  - d) Doubled

Ans. a

- 75 The engine produces dark black smoke due to
- a) Burning of oil
  - b) Due of incomplete combustion
  - c) Due to moisture in fuel
  - d) None of these

Ans. b

- 76 The rotavator blade is generally operated at
- a) 180-320 rpm
  - b) 450-1000 rpm
  - c) 200 – 600 rpm
  - d) None of these

Ans. a

- 77 The traction on rear wheels can be increased by increasing
- a) Weight on rear wheels
  - b) Weight on front wheels
  - c) Decreasing inflation pressure
  - d) Both a and c

Ans. d

- 78 During turning the traction while operating MB plough
- a) Plough should be lifted
  - b) Plough should not be lifted
  - c) Stop the tractor and lift the plough

d) Unable to lift

Ans. a

79 Uniformity measure of a planter is

- a) Equal seed spacing
- b) Equal number of seed dropped per hill
- c) Minimum variation in different openers
- d) All of the above

Ans. d

80 The difference between seed drill and planter is

- a) Variation in hill to hill spacing
- b) Number of seed per hill is more uniform in planter
- c) Seed delivery tube
- d) Furrow opener
- e) Both a and b

Ans. e