QUESTION BOOKLET

Name of Post -STORE PURCHASE OFFICER

Roll No. ⬛⬛⬛⬛

Booklet Series **B**

(Enter your Roll number in the above space)

Time Allowed: 2 Hour

Max. Marks: - 100

INSTRUCTIONS :

1. Use only BLUE/BLACK Ball Point Pen.

2. All questions are COMPULSORY.

3. All questions carry equal marks.

4. Check the BOOKLET thoroughly.

   IN CASE OF ANY DEFECT - MISPRINT, MISSING QUESTION/S, GET THE BOOKLET CHANGED. NO COMPLAINT SHALL BE ENTERTAINED AFTER THE TEST.

5. Before you mark the answer, fill the particulars in the ANSWER SHEET carefully and correctly. Incomplete & Incorrect particulars may result in your answer sheet not being evaluated by the Computer.

6. After completing the test, handover the ANSWER SHEET to the Invigilator.

7. For Rough Work, Blank Sheet is provided at the end of the question – booklet

8. Before filling up the Answer Sheet, Read the instructions for marking the answer sheet carefully printed on the answer sheet.

9. Write the BOOKLET SERIES given at the TOP RIGHT HAND SIDE of the question booklet in the space provide in the answer sheet, by darkening the corresponding circles.

SEAL

1. In which type of welding a pool of molten metal is used

(a) Electro slag

(b) MIG

(c) TIG

(d) Submerged arc welding

2. In termite welding the iron oxide and aluminum oxide are mixed in the ratio of

(a) 1:3

(b) 3:1

(c) 1:1

(d) 1:2

3. The main advantage of shell moulding is that

(a) A metallic pattern is used

(b) The moulds are stronger

(c) Thin section can be easily obtained

(d) All of the above

4. Blanking and piercing operation can be performed simultaneously in

(a) Simple die

(b) Progressive die

(c) Compound die

(d) Combination die

5. Cutting fluid used in carbide tools

(a) Kerosine oil

(b) Water

(c) No cutting fluid

(d) Kerosine oil and water

6. Which of the following is not a chip removal process?

(a) Spinning on lath

(b) Milling

(c) Gear hobbing

(d) Grinding

7. The recommended value of rake angle for machining material like brass is

(a) 0 degree

(b) +10 degree

(c) -10 degree

(d) -15 degree

8. V-block is used in workshop to check

(a) Surface roughness

(b) Roundness of cylindrical work

(c) Dimensions of oval job

(d) Taper on job

9. With continuous chip cutting maximum heat is taken by

(a) Chip

(b) Tool

(c) Job

(d) Depends on velocity of cutting

10. Annealing is done by cooling in

(a) Air

(b) Furnace

(c) Water

(d) Brine

11. Which of the following is not an angle measuring device

(a) Angle plate

(b) Sin bar

(c) Bevel protector

(d) Angle gauge

12. Gear forming operation can be performed by

(a) Shaping

(b) Milling

(c) Broaching

(d) Any of the above

13. In the work study the symbol ☐ implies

(a) Operation

(b) Inspection

(c) Transport

(d) Permanent storage

14. Rankine's theory of failure is applicable for the following type of materials

(a) Brittle

(b) Ductile

(c) Elastic

(d) Plastic

15. Gnatt chart provides information about the

(a) Material handling

(b) Proper utilization of man power

(c) Production schedule

(d) Effective working of machines

16. Which one is the correct relation for deficient truss?

(a) $m = 2j-3$

(b) $m > 2j-3$

(c) $m < 2j-3$

(d) None of the above

17. A simply supported beam of length 8m is carrying an uniformly distributed load of intensity 10N/m. maximum bending moment is

(a) 80 Nm

(b) 20 Nm

(c) 160 Nm

(d) None of the above

18. The area moment of inertia of a triangle of base 'b' and height' h 'about a line parallel to the base an through the vertex is

(a) $bh^3/36$

(b) $bh^3/4$

(c) $bh^3/12$

(d) None of the above

19. Which one is statically indeterminate beam?

(a) Continuous beam

(b) Fixed beam

(c) Propped cantilever

(d) All of the above

20. A force can be transferred in a parallel position by applying

(a) A couple

(b) A force

(c) A couple and a force

(d) A moment

21. A reversible engine has ideal thermal efficiency of 30%.When it is used as a refrigerating machine with all other conditions unchanged, the coefficient of performance will be?

(a) 2.33

(b) 3.33

(c) 5.63

(d) 6

22. The outside diameter of a hollow shaft is twice its inside diameter. The ratio of torque carrying capacity of hollow shaft to that of solid shaft of the same material and same outside diameter is

(a) 15/16

(b) 3/4

(c) ½

(d) 1/16

23. A particle is projected with a velocity of 9.8m/s. Its maximum range in metres is
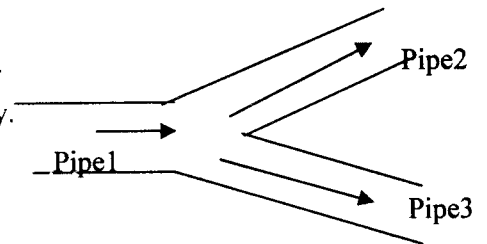
(a) 4.9

(b) 9.8

(c) 19.6

(d) Infinite

24. A fluid is flowing in the branched pipe as shown in the figure.
Area of Pipe1, Pipe2 and Pipe3 are $5m^2$, $3m^2$ and $2m^2$ respectively.
Velocity in Pipe1 and Pipe2 are 3m/s and 4 m/s .
The velocity of fluid in pipe3 is

(a) 1.5m/s

(b) 2m/s

(c) 2.5m/s

(d) 3m/s

25. The velocity component in x and y-directions are given by $u=\lambda xy^3-xy^2$ and $v=xy^2-(3/4)y^4$,Then the value of λ for steady incompressible flow is

(a) 2

(b) 3

(c) 4

(d) 1

26. Work done is zero for the process

(a) Isochoric

(b)Isobaric

(c)Throttling

(d)All of the above

27. The value of entropy at 0^0C is taken

(a) 1

(b)Zero

(c) -1

(d)Any value

28. Steam engine operates on

(a) Carnot cycle

(b)Joule cycle

(c) Stirling cycle

(d)None of the above

29.Thermal efficiency of a thermal power plant is of the order of

(a)15%

(b)20%

(c)30%

(d)45%

30. Cochran boiler is a

(a) Horizontal fire-tube boiler

(b) Horizontal water-tube boiler

(c) Vertical water-tube boiler

(d) Vertical fire-tube boiler

31. The work ratio of simple gas turbine cycle depends on

(a) Pressure ratio

(b)Maximum cycle temperature

(c) Minimum cycle temperature

(d)All the above

32. Plank's law is hold good for

(a) Black body

(b) Polished body

(c) All colored body

(d) All of the above

33. One ton of refrigeration equals to

(a) 50 kcal/min

(b) 50 kcal/hr

(c) 80 kcal/min

(d) 1000 kcal/day

34. The unit of viscosity is

(a) Metres^2/sec

(b) Kg sec/metres^2

(c) Newton sec/metres^2

(d) None of these

35.Ratio of inertia force to viscous force is known as

(a)Mach Number

(b)Froude Number

(c)Reynolds Number

(d) Webers Number

36.Impulse turbine is used for

(a) Low head

(b) High head

(c) Medium head

(d) High flow

37.Hook's law is hold good up to

(a) Elastic limit

(b) Limit of proportionality

(c) Braking point

(d) Yield point

38. Which of the following is most elastic?

(a) Rubber

(b) Brass

(c) Plastic

(d) Steel

39. At point of inflexion in a beam

(a) Shear force is zero

(b) Bending moment changes its sign

(c) Bending moment is maximum

(d) Shear force changes its sign

40. The ratio of equivalent length of the column to the minimum radius of gyration of the cross-sectional area of the column is called

(a) Slenderness ratio

(b) Buckling factor

(c) Column factor

(d) Crippling factor

41. The number of instantaneous centre of a four bar chain mechanism is

(a) 6

(b) 4

(c) 12

(d) 3

42.Withworth quick return mechanism is obtained by inversion of

(a) Roller cam mechanism

(b) Kinematic chain

(c) Five link mechanism

(d) Slider crank mechanism

43. Sensitiveness of governor is defined as

(a)Range of speed/mean speed

(b)Mean speed/Range of sped

(c)Mean speed× range of speed

(d) 2×Mean speed/ range of speed

44. The power transmitted by a belt is maximum when the maximum tension in the belt is

(a) 2 times of the centrifugal tension

(b) 3 times of the centrifugal tension

(c) 4 times of the centrifugal tension

(d) 5 times of the centrifugal tension

45. The product of circular pitch and diametral pitch is

(a) unity

(b) π

(c) $1/\pi$

(d) Module$\times\pi$

46. Pure iron is the structure of

(a) Anstonite

(b) Peralite

(c) Ferrite

(d) Ferrite and cementite

47. The crystal structure of gamma iron is

(a) Face centered cubic

(b) Body centered cubic

(c) Hexagonal close packed

(d) Orthorhombic crystal

48. Blast furnace produces following by reduction of iron ore

(a) Cast iron

(b) Pig iron

(c) Wrought iron

(d) White iron

49. Babit metal is a

(a) Lead based alloy

(b) Tin based alloy

(c) Copper based alloy

(d) Lead based and Copper based alloy

50. Gibbs phase rule is given by the expression

(a) F=C+P

(b) F= C-P

(c) F=C-P-2

(d) F=C-P+2

51. In which district of Haryana is the 'Badkhal Lake' situated?

(a) Hisar

(b) Jind

(c) Sirsa

(d) Faridabad

52. Where is the High court of Haryana functioning?

(a) Patiala

(b) Chandigarh

(c) Sirsa

(d) Gurgaon

53. How many total number of seats are there in Haryana assembly

(a) 75

(b) 80

(c) 85

(d) 90

54. The tomb of Ibrahim Lodi is situated at

(a) Panipat

(b) Gurgaon

(c) Mahendragarh

(d) Rothak

55. Where is Manzi Shaib Gurudwara situated?

(a) Kaithal

(b) Jhajjar

(c) Fatehabad

(d) Rewari

56. When was the famous battle of Panipat fought

(a) 1539

(b) 1556

(c) 1565

(d) 1576

57. Which of the following folk dances belongs to Haryana?

(a) Baoul

(b) Yaksha-Gaan

(c) Gidda

(d) Biehu

58.In which district of Haryana is the Mohar Singh Stadium (Mayur) situated

(a) Faridabad

(b) Ambala

(c) Kurukshetra

(d) Yamuna-Nagar

59. First time the President's rule was imposed in Haryana on

(a) 21st Nov.1967

(b) 30th April,1977

(c) 2nd Dec.1989

(d) 6th April.1991

60. Which breed of buffaloes is famous in Haryana?

(a) Turra

(b) Murra

(c) Chaspa

(d) Pushpa

61. The country which won the last 20-20 world cup cricket is

(a) India

(b) Sri Lanka

(c) Australia

(d) Pakistan

62. Head quarter of IAEA

(a) Vienna

(b) Rome

(c) Paris

(d) London

63.'Dreams from my father' is written by

(a) Nelson Mandela   (b) Bill Clinton

(c) Barak Obama   (d) Sulman Rushdie

64. 2012 Olympic Games will be held in

(a) Paris   (b)Tokyo

(c) London   (d) Delhi

65. United Nations was established on

(a) 24th Oct.1944   (b) 24th Oct.1945

(c) 24th Oct.1946   (d) 24th Oct.1947

66. How many states are in North-East region?

(a) 7   (b) 6

(c) 8   (d) 5

67. How many states are there in India?

(a) 27   (b) 28

(c) 29   (d) 30

68. Chief Minister of which state died in air-crash recently

(a) Kerala   (b) Mizoram

(c) Andhra Pradesh   (d) Karnataka

69. Who is the current Finance Minister of India?

(a) P.Chitambaram   (b) Dr.Monmohan Singh

(c) Pranab Mukarjee   (d) None of the above

70. Study of birds is called

(a) Seiesmology   (b) Osteology

(c) Pomology   (d) Ornithology

71. First Miss Universe of India is

(a) Kumari Rita Fariya   (b) Sushmita Sen

(c) Dyna haden   (d) None of the above

72. The summer capital of Jammu & Kashmir is

(a) Jammu

(b) Srinagar

(c) Both Jammu and Srinagar

(d) None of the above

73. Which symbol is present in a computer key-board

(a) F1

(b) F2

(c) F3

(d) All of the above

74. Which of the following films got Oscar award for its music?

(a) Slumdog Millionaire

(b) Vengeance of the dog

(c) Gazni

(d) Tare Zamin Par

75. The Book 'India Divided' is written by

(a) Dr.Zakir Hussain

(b) Abul Kalam Azad

(c) Mahatma Gandhi

(d) Dr. Rajendra Prasad

76. Which one is correct statement?

(a) Thermal efficiency of S.I engine is more than C.I engine

(b) Thermal efficiency of S.I engine is less than C.I engine

(c) Thermal efficiency of S.I engine is equal to C.I engine

(d) None of these

77. Stirling cycle consists of

(a) Two isothermal and two isochoric

(b) Two isothermal and two adiabatic

(c) Two isothermal and two isobaric

(d) Two isobaric and two isochoric

78. Curburettor is used in

(a) S.I.Engine

(b) C.I.Engine

(c) Both S.I.and C.I.Engine

(d) None of the above

79. Theoritically correct mixture of air and petrol for S.I.engine is

(a) 1:15

(b) 15:1

(c) 10:1

(d) 1:10

80.Iso-octane has octane number

(a) 0

(b) 80

(c) 100

(d) 50

81. Compression ratio for spark ignition engine usually varies between

(a) 4 to 6

(b) 6 to 13

(c) 10 to 18

(d) 14 to 25

82.Morse-test can be conducted for

(a) Petrol engine

(b) Diesel engine

(c) Multi-cylinder engine

(d) All of the above

83. The acid used in automobile battery is

(a) H_2SO_4

(b) HCl

(c) HNO_3

(d) Hydrofluoric acid

84.The automobiles generally utilise batteries having voltage of

(a) 3Volt

(b) 6Volt

(c) 12Volt

(d) 24Volt

85. In a four stroke petrol engine ,the charge is ignited

(a) Before top dead centre

(b) After top dead centre

(c) Before bottom dead centre

(d) After bottom dead centre

86. Indicated power of a 4-stroke engine is equal to

(a) Plan

(b) 2pLAN

(c) (pLAN)/2

(d) 4pLAN

Where: p=Mean effective pressure L=stroke   A=Area of piston N=rpm of engine

87. An engine working on Otto cycle has compression ratio of 4. Assume $\gamma=1.5$.The air standard efficiency of engine is

(a) 30%

(b) 60%

(c) 50%

(d) 33.3%

88. When an engine is idling, it requires

(a) No fuel in the air

(b) Lean fuel air mixture

(c) Stoichiometric mixture

(d) Rich fuel air mixture

89. The ratio of the work obtained at the crank shaft in a given time to the energy supplied during the same time is called

(a) Mechanical efficiency

(b) Overall efficiency

(c) Indicated thermal efficiency

(d) Volumetric efficiency

90. Bomb calorimeter is used to determine the Calorific value of

(a) Solid fuel only

(b) Gaseous fuel only

(c) Solid as well as gaseous fuel

(d) Solid as well as liquid fuel

91. The magneto in an automobile is basically

(a) Transformer

(b) D.C.generator

(c) Capacitor

(d) Magnetic circuit

92. Damper in an automobile is used to

(a) Absorb the energy

(b) Dissipate the energy

(c) Release the energy

(d) Increase the energy

93. Tachometer in a vehicle measures

(a) Speed

(b) Distance

(c) Engine rpm

(d) Fuel consumption

94. The main function of brake fluid is

(a) Lubrication

(b) Power transmission

(c) Cooling

(d) None of these

95. The main function of intake manifold is that it

(a) Promote the mixture of air and fuel

(b) Reduce the intake noise

(c) Cools the intake air to a suitable temperature

(d All of the above

96. When was the state of Haryana formed

(a) 1st Nov.1966

(b) 10th Nov.1966

B

(c) 2nd Jan.1967

(d) 4th March, 1967

97. With how many states does the boundary of Haryana touch?

(a) 4

(b) 5

(c) 6

(d) 7

98. How many districts are there in Haryana?

(a) 21

(b) 25

(c) 28

(d) 32

99. Where is the Atlas Industry in Haryana situated?

(a) Sonipat

(b) Gurgaon

(c) Hisar

(d) Panchkula

100. Which city of Haryana is known as 'City of Weavers'

(a) Mahendragarh

(b) Fatehabad

(c) karnal

(d) Panipat