

PAPER-II
WORKSHOP CALCULATION & SCIENCE & ENGINEERING DRAWING
SEMESTER-I
(MORNING SESSION)
(10th PASS TWO YEAR TRADES)

TIME: 3 HRS.

MARKS: 150

Note: This paper contains two parts – Part A & Part B.

Attempt all the questions.

All questions carry equal marks.

This paper carries negative marking. 25% marks will be deducted for each wrong answer.

PART - A (WORKSHOP CALCULATION & SCIENCE)

(Marks : 75)

Choose the correct answers:

1. 0.2 Kg =
 a) 200 gram b) 20 gram c) 2 gram d) None of these
2. The number $\frac{1}{3} \times \frac{1}{2} + \frac{1}{3}$ is equal to –
 a) 1 b) $\frac{1}{2}$ c) 2 d) $\frac{1}{4}$
3. One gallon is equal to _____ litres.
 a) 4.1 litre b) 4.24 litre c) 4.50 litre d) 4.54 litre
4. Reciprocal of -5 is –
 a) $\frac{-1}{5}$ $\frac{+1}{5}$ c) +5 s) 1
5. Sum of Number $\frac{7}{12}$ & $\frac{-5}{16}$ is equal to –
 a) $\frac{-7}{48}$ b) $\frac{-11}{30}$ c) $\frac{13}{48}$ d) $\frac{1}{3}$
6. The quantity of matter of a substance contains is termed as –
 a) Weight b) Density c) Relative density d) Mass
7. Sum of 2.012 and 201.2 is –
 a) 203.32 b) 203.032 c) 201.32 d) 203.212

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8. 127 cm is equivalent to –
a) 5 inches b) 50 inches c) 500 inches d) None of these
9. Find the weight of a cube of M.S. of 14cm side with its density being 7.8 gm/cc.
a) 21.4 kg b) 2.14 kg c) 0.214 kg d) 1.528 kg
10. 0.3 litre is equal to –
a) 300 ml b) 3000 ml c) 25 ml d) None of these
11. 1 m^3 is equivalent to –
a) 10 litres b) 100 litres c) 1000 litres d) None of these
12. 25.4 mm is equal to –
a) 10 inch b) 0.01 inch c) 1 inch d) None of these
13. In a 90 kg weighting non ferrous casting containing Cu, Tin & Zn in the ratio of 6:3:1, the weight of copper is –
a) 27 kg b) 9 kg c) 54 kg d) None of these
14. A 100 metres long rope is cut into two parts so that one part is $\frac{2}{5}$ th of total length, length of two parts separated are –
a) 20m, 50m b) 40m, 60m c) 30m, 70m d) 50m, 50m
15. Product of $2\frac{1}{2}$ and $3\frac{1}{2}$ is equal to –
a) 6.5 b) 7.75 c) 8.75 d) 8.125
16. If a pump can raise 1000 litres of water per minute to a height of 45 metres, then its horse power of the pump is –
a) 9 HP b) 10 HP c) 24.3 HP d) None of these
17. A car weighting 4000 kg travelling of 25 km/sec stops in 5 sec by decelerating uniformly, then its retardation is –
a) -2 km/sec^2 b) 5 km/sec^2 c) 8 km/sec^2 d) -8 km/sec^2
18. Which one among the following four values of squares ends with its last digit six –
a) 19^2 b) 82^2 c) 109^2 d) 24^2
19. The unit of energy in SI system is –
a) Erg b) Caloric c) Joule d) Volt
20. The unit of power is –
a) Erg b) kWH c) kW d) None of these

21. 0°C is equal to –
a) 20°F b) 25°F c) 32°F d) 320°F
22. The value of 'X' in the following ratio $X : 4 = 9 : 6$ is –
a) 2.66 b) 13.5 c) 6 d) 2.166
23. If the area of a square plot is 2304 m^2 , then the side of the square is –
a) 45 meters b) 48 meters c) 47.9 meters d) 49.02 meters
24. $0.1 \times 0.01 =$
a) 0.1 b) 0.01 c) 0.001 d) 0.00001
25. 52.5 lbs equivalent to –
a) 23.814 kg b) 26.25 kg c) 15.75 kg d) 115.5 kg

**PAPER-II
SEMESTER-I
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PART-B (ENGINEERING DRAWING)

(Marks : 75)

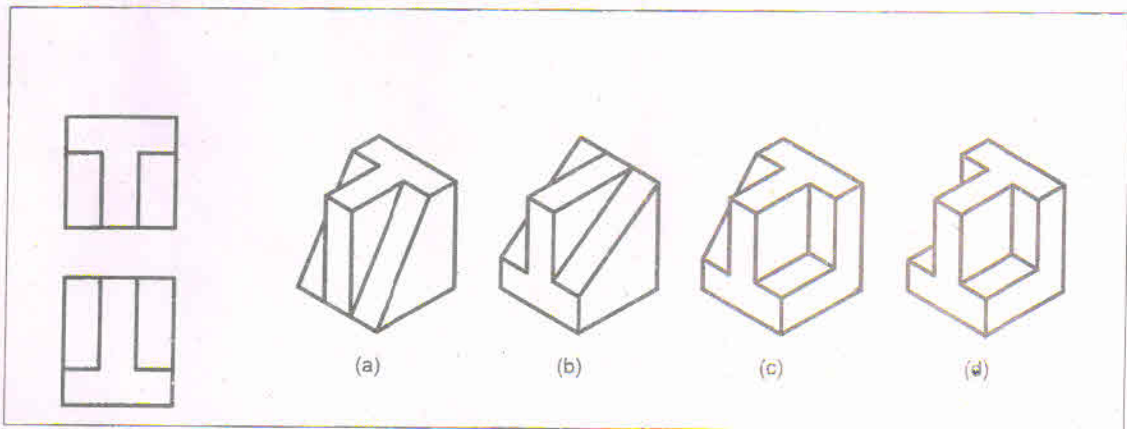
Choose the correct answers:

1. With the help of ruler and compass it is NOT possible to construct the angle of –
a) 37.5° b) 40° c) 22.5° d) 67.5°
2. Which one of the following compass is used to draw very large circles?
a) Beam b) Large c) Bow d) Drop
3. Lettering of drawing sheet should have –
a) In a sentence only first alphabet in capital letters
b) All alphabets in small letters
c) In a sentence only abbreviations in capital letters
d) All alphabets in capital letters
4. During operation of drafter, the two arms of the drafter remains at –
a) 45° b) 90° c) 180° d) 270°
5. Which one of the following compass is used to draw SMALL size circles?
a) Beam b) Large c) Bow d) Drop
6. Which one of the following pencil leads is the hardest?
a) HB b) H c) B d) F
7. To lay off an angle from a given line, what marks on the protractor should you align for higher accuracy –
a) Centre mark and 0 marks only b) 0° and 180° marks only
c) 0° , 180° and Centre marks d) 0° , 90° and 180° marks
8. Parallel lines can be drawn with the help of –
a) Mini drafter b) T square
c) Pair of set squares d) All of these
9. To draw a perpendicular from a given point P on line XY, name the point where the needle of the compass should be placed first –
a) At point P b) Any convenient point along Xy
c) At point X or Y d) A point near the mid point of PX and PY

Contd...2/-

10. A drawing instrument set usually contains all of the following except –
a) Bow compass b) Scale c) Dividers d) Extra leads
11. In engineering system of paper sizes, which of the following is A2 size –
a) 841 mm x 1189 mm b) 594 mm x 841 mm
c) 420 mm x 594 mm d) 210 mm x 297 mm
12. A title block contains all of the following information except –
a) Name and address of the company b) Parts list
c) Drawing sheet size letter designation d) Drawing number
13. Which of the following pairs of orthographic views both show the height dimension?
a) Left side and front b) Top and Front
c) Top and Rear d) Bottom and Right side
14. Centre line are drawn as –
a) Continuous narrow lines b) Dashed narrow lines
c) Long dashed dotted narrow lines d) Long dashed double dotted narrow lines
15. Projection of an object shown by three views is known as –
a) Perspective b) Isometric c) Oblique d) Orthographic
16. The type of pictorial projection generally used by the architect is –
a) Orthography b) Oblique c) Perspective d) Isometric
17. The recommended symbol for indicating the angle of projection shows two views of the frustum of a –
a) Square pyramid b) Triangular pyramid
c) Cone d) Any of these
18. The projection in isometric view are –
a) Converging b) Parallel to the plane of projection
c) Diverging d) Perpendicular to the plane of projection
19. Which of the following purpose is NOT served by a divider?
a) Divide lines or curves into a number of equal parts
b) Transfer measurements from one part of the drawing to another part
c) Make full size, reduced size or enlarged size drawing
d) Set off a series of equal distances on the drawing
20. The inclination of letters as recommended by BIS is –
a) 75° b) 70° c) 65° d) 60°

21. Two point perspective are drawn by –
 a) Single vanishing point method b) Double vanishing point method
 c) Triple vanishing point method d) All of these
22. If a line intersects a circle at two points and does not pass through the centre this line segment is called as –
 a) Diameter b) Chord c) Radial line d) Quadrant
23. Methods of arrangement of dimensions includes –
 a) Parallel, continuous and combined
 b) Perpendicular, parallel and combined
 c) Perpendicular, continuous and combined
 d) Perpendicular, parallel and continuous
24. Select the correct isometric view corresponding to the orthographic views shown –



25. The thickness of the line of a letter with 14mm height in B type lettering is –
 a) 1 mm b) 1.5 mm c) 1.25 mm d) 2 mm
