

066/21

Question Booklet Alpha Code

A

	Question Booklet Sl. No.
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Total Number of Questions : 100

Time : 75 Minutes

Maximum Marks : 100

INSTRUCTIONS TO CANDIDATES

1. The Question Paper will be given in the form of a Question Booklet. There will be four versions of Question Booklets with Question Booklet Alpha Code viz. **A, B, C & D**.
2. The Question Booklet Alpha Code will be printed on the top left margin of the facing sheet of the Question Booklet.
3. The Question Booklet Alpha Code allotted to you will be noted in your seating position in the Examination Hall.
4. If you get a Question Booklet where the alpha code does not match to the allotted alpha code in the seating position, please draw the attention of the Invigilator **IMMEDIATELY**.
5. The Question Booklet Serial Number is printed on the top right margin of the facing sheet. If your Question Booklet is un-numbered, please get it replaced by new Question Booklet with same alpha code.
6. The Question Booklet will be sealed at the middle of the right margin. Candidate should not open the Question Booklet, until the indication is given to start answering.
7. Immediately after the commencement of the examination, the candidate should check that the Question Booklet supplied to him/her contains all the 100 questions in serial order. The Question Booklet does not have unprinted or torn or missing pages and if so he/she should bring it to the notice of the Invigilator and get it replaced by a complete booklet with same alpha code. This is most important.
8. A blank sheet of paper is attached to the Question Booklet. This may be used for rough work.
9. **Please read carefully all the instructions on the reverse of the Answer Sheet before marking your answers.**
10. Each question is provided with four choices **(A), (B), (C)** and **(D)** having one correct answer. Choose the correct answer and darken the bubble corresponding to the question number using Blue or Black Ball Point Pen in the OMR Answer Sheet.
11. **Each correct answer carries 1 mark and for each wrong answer 1/3 mark will be deducted. No negative mark for unattended questions.**
12. No candidate will be allowed to leave the examination hall till the end of the session and without handing over his/her Answer Sheet to the Invigilator. Candidates should ensure that the Invigilator has verified all the entries in the Register Number Coding Sheet and that the Invigilator has affixed his/her signature in the space provided.
13. Strict compliance of instructions is essential. Any malpractice or attempt to commit any kind of malpractice in the Examination will result in the disqualification of the candidate.



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1. Dimensional formulae of force is

A) MLT^{-2}	B) MLT^{-1}
C) MLT^2	D) MLT

2. Equilibrant is same as the resultant in magnitude but its direction is _____ to the resultant.

A) Same as	B) Twice
C) Opposite	D) Three times

3. A beam is fixed at one end and free at the other end and it is called _____ beam.

A) Overhanging	B) Cantilever
C) Simply supported	D) Continues

4. Dynamic friction is found to be _____ limiting friction.

A) More than	B) Less than
C) Equal to	D) Twice

5. In an ideal machine velocity ratio is _____ to the mechanical advantage.

A) More than	B) Less than
C) Equal to	D) Two times

6. $1 \text{ km/hr} = \text{_____ m/sec.}$

A) $5/18$	B) 1000
C) $5/9$	D) 3600

7. In _____ driving and driven shaft are right angle but not intersecting.

A) Bevel gear	B) Spur gear
C) Rack and pinion	D) Worm and worm wheel

8. In an inclined plane the velocity ratio is

A) $\frac{1}{\sin\theta}$	B) $\frac{2\pi R}{P}$
C) $\frac{1}{\cos\theta}$	D) $\frac{1}{\tan\theta}$

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9. Momentum = Mass \times _____.
- A) Velocity
B) Acceleration
C) Time
D) Displacement
10. The unit of mechanical advantage is
- A) Newton
B) Joule
C) Watt
D) No unit
11. A rubber ball is dropped from a tower it reaches the ground in one second, then the height of the tower is
- A) 4 m
B) 4.9 m
C) 6 m
D) 6.2 m
12. In a "V" belt specification "C3048 IS:2494" "C" indicates
- A) Manufactures code
B) Inside length
C) V belt cross section
D) Type of material
13. For taking high axial thrust loads _____ bearings are used.
- A) Ball bearing
B) Needle bearing
C) Tapped roller bearing
D) Roller bearing
14. The centre of gravity of a solid hemisphere of radius 'r' is at a distance of _____ from the diametral axis.
- A) $3r/8$
B) $r/2$
C) $3r/4$
D) $r/8$
15. When turning to turn a key in to a lock the force applied is
- A) Coplanar force
B) Lever
C) Couple
D) Moment
16. Which of the following is a vector quantity ?
- A) Time
B) Density
C) Acceleration
D) Mass

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25. If a line is _____ to any one of the reference planes, its projection on that plane will have true length.
- A) Parallel
B) Inclined
C) Intersecting
D) Touching
26. The total internal angle of a regular polygon is 1800 degree, then the number of side is
- A) 12
B) 10
C) 11
D) 15
27. For making a funnel _____ development method is used.
- A) Parallel line
B) Radial line
C) Triangulation
D) Approximate
28. The angle of BSW thread is _____ degree.
- A) 60
B) 47.5
C) 45
D) 55
29. If D = nominal diameter of bolt, then distance across corner of nut is _____ mm.
- A) $1.5D$
B) $2D$
C) $1.5D + 3$
D) $2D + 3$
30. The angle of tail stock dead centre nose is _____ degree.
- A) 60
B) 45
C) 90
D) 30
31. In _____ projection the object is in between observer and plane.
- A) First angle
B) Third angle
C) Both in first angle and third angle
D) None of these
32. _____ lines are drawn usually at an angle of 45 degree to the horizontal line.
- A) Hidden
B) Centre
C) Section
D) Chain

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57. What is bleeding ?
- A) Replace seals and springs of a hydraulic valve
 - B) Remove air from a hydraulic line
 - C) The process of top up or change the hydraulic fluid
 - D) The regular maintenance of a hydraulic machine
58. The flow rate of oil in a hydraulic machine is expressed in
- A) kg/cm^2
 - B) m^2/minute
 - C) kg/m^3
 - D) m^3/second
59. FRL (Filter, Regulator and Lubricator) is an essential part of
- A) Pneumatic power tool
 - B) Hydraulic press
 - C) Hydraulic brake system
 - D) Direction control valve
60. Which tool is used to hold large diameter pipes ?
- A) Channel lock plier
 - B) Pipe wrench
 - C) Chain wrench
 - D) Pipe vice
61. The valve which prevent reverse flow of fluid in a hydraulic machine
- A) Protection valve
 - B) Non-return valve
 - C) Throttle valve
 - D) Unloaded valve
62. Which device is used to connect two pipes with different diameter ?
- A) Union
 - B) Cap
 - C) Nipple
 - D) None of these
63. The process of making leak proof joint in a riveted joint is
- A) Welding
 - B) Brazing
 - C) Caulking and Fullering
 - D) Soldering
64. What is long radius elbow ?
- A) Radius is equal the bore of pipe
 - B) Radius is 1.5 times of bore of pipe
 - C) Radius is 2 times of bore of pipe
 - D) Radius is half of bore of pipe

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Space for Rough Work



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