



ENGINEERS



BARC Recruitment 2023

1000 QS

with

Solution

MECHANICAL ENGINEERING

SET 13

SHIVAM SIR

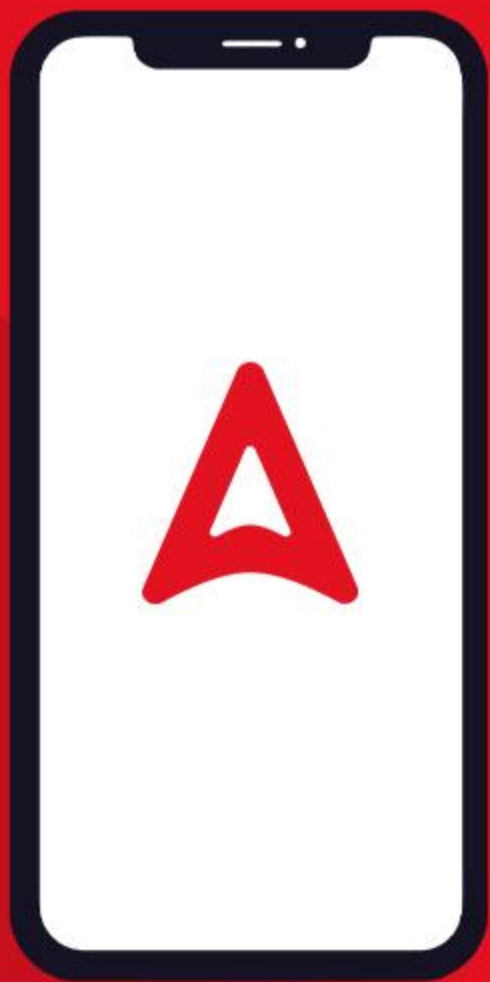
FREE PDF



PDF



APP FEATURES



Download Now
Adda247 APP



Premium Study Material



Current Affairs



Job Alerts



Daily Quizzes



Subject-wise Quizzes



Magazines



Power Capsule



Notes & Articles



Videos

Mechanical Engineering
For 78% Discount

Use Code : "Y166"

Q. Group A items constitute the following percentage of items in ABC analysis:.

- (a) 10 to 20%
- (b) 30 to 40%
- (c) 40 to 50%
- (d) 50 to 60%



Mentor : Shivam Gupta

Mechanical Soormas

- Piyush Mechanical
- Subir
- Lokesh Varwan
- Sandeep Kumar Jha
- Kritika Mall
- Aashik Hussain
- Ashu Lone
- Shivani Singh
- I'm Groot
- Rahul Kumar
- Pannelal Kushwaha
- Pankaj Mahato
- Raj Yadav
- Ruby Prajapati
- Ayush Suthar
- Ashutosh Kant
- Rajat Bobde
- Aman Kumar
- Gurdeep Singh
- Rekha Maurya
- Anuj Kanoujiya
- Ajaya Suna
- Rajesh Rohila
- Ritika Saxena
- Kumari Manisha
- Shri Krishna
- Sonakshi Pulast
- Ajay Kumar

for **SPECIAL** Code : "Y166"
DISCOUNT

Mechanical Soormas

- Lalita Kushwaha
- Deepak Kumar
- Narendra Suna
- Dilip Gupta
- Ani-Bir
- Ayush DJ
- Er. Shubham Yadav
- Nandan Mehta
- Saikurushna Papulwar

for **SPECIAL**
DISCOUNT Code : "Y166"

Mechanical Engineering
For 78% Discount
Use Code : "Y166"



Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. If a cube of 100 mm dimension is to be made of Aluminium (shrinkage allowance = 10 mm/m). What will be the dimension of wooden pattern? Assume only shrinkage allowance.

- (a) 101mm × 101mm × 101mm
- (b) 100mm × 99mm × 98mm
- (c) 99mm × 99mm × 99mm
- (d) 102mm × 101mm × 100mm



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. A work piece is turned on a lathe at 100 m/min cutting speed, 0.4 mm/rev and 1.5 mm depth of cut. What is the rate of metal removal_?

- A. 1000mm³/min
- B. 20000mm³/min
- C. 60000mm³/ min
- D. 155 mm³/min



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

- Q. The speed of an engine varies from 110 rad/s to 90 rad/s. During cycle the change in kinetic energy is found to be 200 N-m. The inertia of the flywheel in Kg-m² is: _
- A. 0.2
 - B. 0.8
 - C. 0.1
 - D. 0.4



Mentor : Shivam Gupta



ENGINEERS

MECHANICAL ENGINEERING

MAHAPACK

SSC JE/RRB JE/MPPEB /AAI JE ATC/DDA JE
& All Other JE & AE Exams

- > 1500+ Hrs of Live Classes
- > 2085+ Hrs of Recorded Videos
- > 72 Ebooks
- > 1064+ Full Length Mock Tests
- > Live Class Pdf's & Study Notes

BILINGUAL

Mechanical Engineering

ka Mahapack

Live Class, Video Course
Test Series , Ebooks



BUY NOW

FLAT **77%** OFF +1% EXTRA
Discount On App

USE CODE **Y166**



Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. A solid circular shaft of 40 mm diameter transmits a torque of 3200 N-m. The value of maximum stress developed is -

- A. $400/\pi$
- B. $800/\pi$
- C. $1600/\pi$
- D. $600/\pi$



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

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

- A. 80/ 81
- B. 1/81
- C. 8/9
- D. 1/9



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. A Newtonian fluid having viscosity of 0.39 Ns/m^2 and specific gravity of 0.91 flows through a 25 mm diameter pipe with velocity of 3.6 m/s. Then the value of Reynold's number is:.

- A. 210
- B. 240
- C. 175
- D. 155



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. A water jet, 0.0020 m^2 in area, is issued from a nozzle with a velocity of 10 m/s . It is made to impinge perpendicular on a plate that moves away from the jet with a velocity of 5 m/s . The force on plate is: _

- A. 75 N
- B. 100 N
- C. 50 N
- D. 150 N



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

- Q. What is the composition of low-alloy steel 48XX_?
- A. C = 0.6%, Cr = 1.3%
 - B. C = 0.03%, Cr = 1.3%
 - C. Ni = 3.5%, Mo = 0.25%
 - D. C = 0.06%, Cr = 13%



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

- Q. The refrigerants belonging to the Freon group are-:
- A. inorganic
 - B. halocarbon
 - C. azeotrope
 - D. hydrocarbon



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount

Use Code : "Y166"

Q. Which refrigerant is used commonly in domestic refrigerators!?

- A. Carbon dioxide
- B. Sulphur dioxide
- C. R12
- D. R-134a



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount

Use Code : "Y166"

Q. If the Reynolds number in a pipe is less than _____, then the flow is said to laminar.

- A. 2000
- B. 3000
- C. 2500
- D. 4000



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. A real fluid in which shear stress is proportional to rate of shear strain, is.

- A. Newtonian fluid
- B. ideal solid
- C. non Newtonian fluid
- D. ideal fluid



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. The maximum working pressure in a Lancashire boiler is.

- A. 16 bar
- B. 30 bar
- C. 24 bar
- D. 28 bar



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. The phenomenon of vapour bubble formation, and sudden collapsing of it in a turbine, is called-:

- A. priming
- B. cavitation
- C. vibration
- D. buddle



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. The range of specific speed of a Kaplan or propeller turbine in SI units is.:

- A. 250 – 850
- B. 51 - 225
- C. 30 - 51
- D. 8.5 – 30



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. Specific volume is reciprocal of-:

- A. volume
- B. mass density
- C. area
- D. mass



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

- Q. Which of the following is the basic property of fluid-?
- A. Can resist tangential stresses in static condition
 - B. Never regain its original shape on release of shear stress
 - C. It undergoes a definite deformation
 - D. More compact in structure



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. Calculate the dryness fraction of steam which has 1.5 kg of water in suspension with 50 kg of steam!.

- A. 0.83
- B. 0.75
- C. 0.68
- D. 0.97



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. A fluid in which shear stress is more than the yield value, and shear stress is proportional to the rate of shear strain is!

- A. Newtonian fluid
- B. real fluid
- C. ideal fluid
- D. ideal plastic fluid



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. If the velocity of fluid does NOT change with respect to time the flow is said to be -:

- A. interflow
- B. steady flow
- C. non uniform flow
- D. cross flow



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. The moment of a force about any point is the _____ of force and perpendicular distance between the point and line of action of force-

- A. subtraction
- B. Product
- C. Division
- D. Sum



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. HS6-5-2-5 indicates a high speed steel containing.

- A. W = 6%, Mo = 5%, V = 2%, Co = 5%
- B. Mo = 6%, V = 5%, W = 2%, Co = 5%
- C. Co = 6%, Mo = 5%, V = 2%, W = 5%
- D. Mo = 6%, W = 5%, V = 2%, Co = 5%



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount

Use Code : "Y166"

Q. As per regulations, boilers should be fitted with _____ safety valves-

- A. five
- B. two
- C. four
- D. three



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. In the main characteristic curve of a centrifugal pump, the power is proportional to!

- A. speed
- B. fourth power of speed
- C. square of speed
- D. cube of speed



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount

Use Code : "Y166"

Q. The differential manometer consists of a tube of _____ shape.

- A. U
- B. X
- C. V
- D. T



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. The boiler is protected from damage due to overheating for low water level, using a.:

- A. fusible plug
- B. feed check valve
- C. safety valve
- D. below off cock



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. The efficiency of a Cochran boiler is in the range of.

- A. 70 – 75%
- B. 20 – 25%
- C. 90 – 95%
- D. 40 – 45%



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

Q. The upward force equal to the weight of fluid displaced by the body is called.

- A. buoyancy
- B. metacentric height
- C. centre of mass
- D. metacenter



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

- Q. Parallel forces have their lines of action-
- A. perpendicular to each other
 - B. parallel to each other
 - C. transverse to each other
 - D. tangential to each other



Mentor : Shivam Gupta

Mechanical Engineering
For 78% Discount
Use Code : "Y166"

HW. The refrigerants belonging to the Freon group are-:

- A. inorganic
- B. halocarbon
- C. azeotrope
- D. hydrocarbon



Mentor : Shivam Gupta