



Participant ID	
Participant Name	
Test Center Name	
Test Date	29/09/2024
Test Time	1:30 PM - 3:30 PM
Subject	Junior Engineering Assistant IV P and U

Section : Subject Knowledge

Q.1 The ratio of mass flow rate and volume flow rate gives the unit of:

- Ans
- A. specific volume
 - B. weight density
 - C. mass density
 - D. specific gravity

Question ID : 6306801010519
 Option 1 ID : 6306803965566
 Option 2 ID : 6306803965568
 Option 3 ID : 6306803965567
 Option 4 ID : 6306803965569
 Status : Answered
 Chosen Option : B

Q.2 When starting the condensate extraction pump (CEP) in a steam turbine system, which of the following actions should be performed if there is a vacuum inside the condenser?

- Ans
- A. Close the condensate inlet and outlet valves
 - B. Increase the differential pressure of the strainer
 - C. Start the pump without any additional steps
 - D. Open the vacuum balance valve

Question ID : 630680996449
 Option 1 ID : 6306803909528
 Option 2 ID : 6306803909530
 Option 3 ID : 6306803909531
 Option 4 ID : 6306803909529
 Status : Answered
 Chosen Option : D

Q.3 Pressure (p) is the force per unit area applied in a direction perpendicular to the surface of an object. It is the resultant effect of

- Ans
- A. kgf/m²
 - B. lbf/in²
 - C. Pascal (Pa)
 - D. bar

Q.4 The permissible limit of the boiler water TDS is 60 mg/L. If the TDS of boiler feedwater is 10 mg/L, then what is the percentage blowdown? (TDS total dissolved solids)

- Ans A. 20%
 B. 10%
 C. 30%
 D. 40%

Question ID : 6306801008775
Option 1 ID : 6306803958623
Option 2 ID : 6306803958622
Option 3 ID : 6306803958624
Option 4 ID : 6306803958625
Status : Answered
Chosen Option : C

Q.5 Read the given descriptions of pressure-sensing elements.

1. Utilises a curved, flexible tube that straightens under applied pressure
2. Involves a piston that compresses a spring when pressure is applied
3. Employs an expandable component resembling an accordion to measure pressure
4. Uses a thin, flexible membrane that deforms when pressure is exerted on it

Which of these descriptions matches the pressure-sensing element commonly used in process pressure measurement, specifically suited for detecting small pressure changes with high accuracy?

- Ans A. Only description 3 is correct
 B. Only description 4 is correct
 C. Only description 1 is correct
 D. Descriptions 1 and 2 are correct

Question ID : 630680996764
Option 1 ID : 6306803910790
Option 2 ID : 6306803910791
Option 3 ID : 6306803910788
Option 4 ID : 6306803910789
Status : Answered
Chosen Option : D

Q.6 Why are both ID fan and FD fan important in a boiler system?

- Ans A. ID fan generates electricity, while FD fan transfers heat.
 B. ID fan and FD fan both supply combustion air but at different stages.
 C. ID fan evacuates combustion products, while FD fan supplies combustion air.
 D. ID fan and FD fan both evacuate combustion products but in different directions.

Question ID : 630680996702
Option 1 ID : 6306803910541
Option 2 ID : 6306803910542
Option 3 ID : 6306803910540
Option 4 ID : 6306803910543
Status : Answered
Chosen Option : C

Q.7 What is the primary characteristic that distinguishes wet steam from dry, saturated steam?

- Ans A. Wet steam contains water particles, while dry steam does not.
 B. Wet steam is visible and contains water droplets.
 C. Wet steam has a higher temperature than dry steam.
 D. Wet steam is heavier and more dense than dry steam.

Question ID : 630680996429
Option 1 ID : 6306803909450
Option 2 ID : 6306803909448
Option 3 ID : 6306803909449
Option 4 ID : 6306803909451
Status : Answered
Chosen Option : D

Q.8 What is the primary effect of heating the sensor in a liquid expansion type temperature-measuring device?

- Ans
- A. The liquid inside the sensor solidifies, causing a decrease in pressure.
 - B. The liquid inside the sensor remains unchanged, with no effect on pressure.
 - C. The liquid inside the sensor contracts and its density increases.
 - D. The liquid inside the sensor expands or evaporates, increasing pressure.

Question ID : 630680996649
Option 1 ID : 6306803910331
Option 2 ID : 6306803910330
Option 3 ID : 6306803910328
Option 4 ID : 6306803910329
Status : Answered
Chosen Option : C

Q.9 What happens to the boiler efficiency when the economiser is removed?

- Ans
- A. It becomes optimal.
 - B. It increases.
 - C. It remains the same.
 - D. It decreases significantly.

Question ID : 6306801004178
Option 1 ID : 6306803940759
Option 2 ID : 6306803940757
Option 3 ID : 6306803940758
Option 4 ID : 6306803940760
Status : Answered
Chosen Option : D

Q.10 As per the Indian Boiler Act, 1923, the boiler which is used for generating steam under pressure is any closed vessel:

- Ans
- A. having 8.75 L to 14.75 L capacity
 - B. having less than 8.75 L capacity
 - C. exceeding 22.75 L capacity
 - D. having 14.75 L to 22.75 L capacity

Question ID : 6306801008741
Option 1 ID : 6306803958487
Option 2 ID : 6306803958486
Option 3 ID : 6306803958489
Option 4 ID : 6306803958488
Status : Answered
Chosen Option : C

Q.11 How is waste heat recovered in an economiser?

- Ans
- A. By using the heat of the flue gases to preheat the boiler fuel
 - B. By transferring flue gas heat to feedwater through convection
 - C. By transferring heat from pressurised feedwater to flue gases
 - D. By generating steam from the heat of the flue gases

Question ID : 6306801004239
Option 1 ID : 6306803940932
Option 2 ID : 6306803940930
Option 3 ID : 6306803940929
Option 4 ID : 6306803940931
Status : Answered
Chosen Option : A

Q.12 How can a user align the text within a text box in MS PowerPoint?

- Ans
- A. By using the 'Paragraph' group in the 'Home' tab
 - B. By pressing Ctrl + A
 - C. By dragging and dropping the text to the desired position
 - D. By right-clicking on the text and selecting 'Align'

Question ID : 630680745630
Option 1 ID : 6306802922695
Option 2 ID : 6306802922698
Option 3 ID : 6306802922696
Option 4 ID : 6306802922697
Status : Answered
Chosen Option : D

Q.13 In a boiler power plant, a pressure gauge is calibrated to read 0-1000 kPa. The gauge is installed to measure the steam pressure. If the gauge reads 650 kPa, what is the range of the actual steam pressure? (Assume an accuracy of 1% for this gauge.)

- Ans
- A. 645 kPa to 665 kPa
 - B. 635 kPa to 655 kPa
 - C. 650 kPa to 670 kPa
 - D. 640 kPa to 660 kPa

Question ID : 6306801003881
Option 1 ID : 6306803939747
Option 2 ID : 6306803939745
Option 3 ID : 6306803939748
Option 4 ID : 6306803939746
Status : Answered
Chosen Option : C

Q.14 Which of the following sums up an IBR boiler the best?

- Ans
- A. A boiler that must comply with specific design and material standards under the Indian Boiler Regulations
 - B. A boiler primarily used for residential heating
 - C. A boiler that operates without any need for periodic inspection
 - D. A boiler that does not require any formal certification for operation

Question ID : 6306801010865
Option 1 ID : 6306803966922
Option 2 ID : 6306803966923
Option 3 ID : 6306803966924
Option 4 ID : 6306803966921
Status : Answered
Chosen Option : D

Q.15 Which of the following devices is designed to increase the thermal efficiency of a boiler system by recovering residual heat from the flue gases?

- Ans
- A. Air preheater
 - B. Boiler drum
 - C. Superheater
 - D. Economiser

Question ID : 6306801003814
Option 1 ID : 6306803939458
Option 2 ID : 6306803939460
Option 3 ID : 6306803939459
Option 4 ID : 6306803939457
Status : Answered
Chosen Option : D

Q.16 What is the typical range of excess air or oxygen levels at which a boiler is expected to operate for the highest efficiency?

- Ans
- A. 5 - 10% excess air or 1 - 2% oxygen
 - B. 30 - 40% excess air or 6 - 8% oxygen
 - C. 20 - 30% excess air or 4 - 6% oxygen
 - D. 10 - 20% excess air or 2 - 4% oxygen

Question ID : 630680996632
Option 1 ID : 6306803910260
Option 2 ID : 6306803910263
Option 3 ID : 6306803910262
Option 4 ID : 6306803910261
Status : Answered
Chosen Option : C

Q.17 A gas has a temperature of 27°C. What is its temperature in Kelvin and Rankine?

- Ans
- A. 300.15 K and 850.67°R
 - B. 273.15 K and 491.67°R
 - C. 300.15 K and 540.27°R
 - D. 273.15 K and 509.67°R

Question ID : 630680996665
Option 1 ID : 6306803910394
Option 2 ID : 6306803910392
Option 3 ID : 6306803910393
Option 4 ID : 6306803910395
Status : Answered
Chosen Option : A

Q.18 Which of the following mountings is used in high-pressure boilers, specifically designed to release steam automatically when the pressure exceeds a safe limit?

- Ans A. Water level indicator
 B. Safety valve
 C. Pressure gauge
 D. Temperature gauge

Question ID : 6306801002346
Option 1 ID : 6306803933482
Option 2 ID : 6306803933483
Option 3 ID : 6306803933484
Option 4 ID : 6306803933481
Status : Answered
Chosen Option : B

Q.19 If, during operation of the boiler, the pressure gauge reads zero pressure, what should be done?.

- Ans A. Increase the fuel flow to the boiler
 B. Open parts of boiler to vary the risk of explosion
 C. Check for water level issues and potential boiler shutdown
 D. Reduce the load on the boiler

Question ID : 6306801006847
Option 1 ID : 6306803951122
Option 2 ID : 6306803951125
Option 3 ID : 6306803951123
Option 4 ID : 6306803951124
Status : Answered
Chosen Option : C

Q.20 Why is an IBR boiler mandated to have a pressure gauge and safety valve?

- Ans A. To reduce fuel consumption
 B. To ensure operational safety and compliance with regulations
 C. To increase steam output
 D. To improve boiler efficiency

Question ID : 6306801004615
Option 1 ID : 6306803942348
Option 2 ID : 6306803942346
Option 3 ID : 6306803942347
Option 4 ID : 6306803942345
Status : Answered
Chosen Option : B

Q.21 DRAM stands for _____.

- Ans A. Digital Random Access Memory
 B. Dual Random Access Memory
 C. Dynamic Random Access Memory
 D. Direct Random Access Memory

Question ID : 6306801035721
Option 1 ID : 6306804065794
Option 2 ID : 6306804065793
Option 3 ID : 6306804065795
Option 4 ID : 6306804065792
Status : Answered
Chosen Option : C

Q.22 Which of the following valves is used to quickly shut off sections of a boiler system?

- Ans A. Gate valve
 B. Needle valve
 C. Check valve
 D. Ball valve

Question ID : 6306801010000
Option 1 ID : 6306803963479
Option 2 ID : 6306803963480
Option 3 ID : 6306803963481
Option 4 ID : 6306803963482
Status : Answered
Chosen Option : A

Q.23 What kind of media is utilised to pressurise the boiler during a hydraulic test?

- Ans A. Steam
 B. Water
 C. Compressed air
 D. Oil

Question ID : 6306801006749
Option 1 ID : 6306803950735
Option 2 ID : 6306803950736
Option 3 ID : 6306803950734
Option 4 ID : 6306803950737
Status : Answered
Chosen Option : B

Q.24 The force a flowing fluid exerts on a body in the flow direction is called:

- Ans A. pressure force
 B. surface tension force
 C. drag force
 D. elastic force

Question ID : 6306801010512
Option 1 ID : 6306803965545
Option 2 ID : 6306803965542
Option 3 ID : 6306803965544
Option 4 ID : 6306803965543
Status : Answered
Chosen Option : A

Q.25 Which of the following file formats for workbooks in MS Excel is compatible with other types of spreadsheet software?

- Ans A. .csv
 B. .pdf
 C. .xlsb
 D. .xlsx

Question ID : 630680782087
Option 1 ID : 6306803065258
Option 2 ID : 6306803065259
Option 3 ID : 6306803065257
Option 4 ID : 6306803065256
Status : Answered
Chosen Option : C

Q.26 What is the primary purpose of conducting a hydraulic test on a boiler?

- Ans A. To verify thermal performance
 B. To inspect safety valve operation
 C. To detect leaks and ensure pressure integrity
 D. To evaluate refractory condition

Question ID : 6306801003898
Option 1 ID : 6306803939797
Option 2 ID : 6306803939799
Option 3 ID : 6306803939798
Option 4 ID : 6306803939800
Status : Answered
Chosen Option : C

Q.27 Under the Indian Boilers Act, 1923, the maximum period between successive inspections of a boiler is typically _____.

- Ans A. two years
 B. one year
 C. five years
 D. six months

Question ID : 6306801004662
Option 1 ID : 6306803942530
Option 2 ID : 6306803942529
Option 3 ID : 6306803942531
Option 4 ID : 6306803942532
Status : Answered
Chosen Option : B

Q.28 Which of the following valves is a quick closing valve and stops the steam entry into the turbine immediately when it closes?

- Ans A. Safety valve
 B. Pressure regulating valve
 C. Governing valve
 D. Emergency stop valve

Question ID : 6306801010340
Option 1 ID : 6306803964866
Option 2 ID : 6306803964867
Option 3 ID : 6306803964869
Option 4 ID : 6306803964868
Status : Answered
Chosen Option : C

Q.29 In a reaction turbine, what is the primary function of the fixed blades attached to the casing?

- Ans A. To increase the pressure of the steam
 B. To decrease the velocity of the steam
 C. To guide the steam into the moving blades
 D. To produce a reaction force on the steam

Question ID : 6306801003386
Option 1 ID : 6306803937683
Option 2 ID : 6306803937684
Option 3 ID : 6306803937682
Option 4 ID : 6306803937681
Status : Answered
Chosen Option : D

Q.30 Which kind of boiler system has the highest likelihood of having an economiser installed for waste heat recovery?

- Ans A. High-pressure water-tube boiler
 B. Steam generator
 C. Small residential boiler
 D. Low-pressure fire-tube boiler

Question ID : 6306801004707
Option 1 ID : 6306803942698
Option 2 ID : 6306803942699
Option 3 ID : 6306803942700
Option 4 ID : 6306803942697
Status : Answered
Chosen Option : A

Q.31 Which of the following methods of external water treatment easily removes scale forming calcium and magnesium ions from the water by ion exchange process using resins?

- Ans A. Degasser
 B. Cation exchanger
 C. Demineralising
 D. Softener

Question ID : 6306801011122
Option 1 ID : 6306803967936
Option 2 ID : 6306803967935
Option 3 ID : 6306803967934
Option 4 ID : 6306803967933
Status : Answered
Chosen Option : C

Q.32 Which type of valve is used to control the flow rate in a pipeline that is typically operated by an external power source or pneumatic signal?

- Ans A. Regulation valve
 B. Control valve
 C. Isolation valve
 D. Check valve

Question ID : 6306801002356
Option 1 ID : 6306803933538
Option 2 ID : 6306803933539
Option 3 ID : 6306803933537
Option 4 ID : 6306803933540
Status : Answered
Chosen Option : B

Q.33 Which of the following devices removes the entrained water particles from the steam conveyed to the steam engine or turbine?

- Ans A. Superheater
 B. Steam separator
 C. Air heater
 D. Economiser

Question ID : 6306801011072
Option 1 ID : 6306803967737
Option 2 ID : 6306803967740
Option 3 ID : 6306803967738
Option 4 ID : 6306803967739
Status : Answered
Chosen Option : A

Q.34 What is the primary function of a Programmable Logic Controller (PLC) in power plant automation?

- Ans A. To continuously measure process inputs and generate output signals
 B. To replace the need for human operators in all power plant processes
 C. To store large amounts of data for processing
 D. To serve as a memory storage device similar to RAM and ROM

Question ID : 6306801004329
Option 1 ID : 6306803941222
Option 2 ID : 6306803941223
Option 3 ID : 6306803941221
Option 4 ID : 6306803941224
Status : Answered
Chosen Option : B

Q.35 Which of the following components is opened after draining the water and isolating the other connected pipeline valves during the inspection of a boiler?

- Ans A. Hand hole cap of water header
 B. Economiser
 C. Steam drum manhole
 D. Superheater

Question ID : 6306801008781
Option 1 ID : 6306803958646
Option 2 ID : 6306803958649
Option 3 ID : 6306803958647
Option 4 ID : 6306803958648
Status : Answered
Chosen Option : C

Q.36 A venturi meter is inserted in a vertical pipe carrying water, flowing in the upward direction. A differential mercury manometer connected to the inlet and throat gives a reading of 20 cm. What will be the differential pressure head? Take specific gravity of mercury = 13.5.

- Ans A. 250 cm of water
 B. 100 cm of water
 C. 200 cm of water
 D. 150 cm of water

Question ID : 6306801010538
Option 1 ID : 6306803965637
Option 2 ID : 6306803965634
Option 3 ID : 6306803965636
Option 4 ID : 6306803965635
Status : Answered
Chosen Option : B

Q.37 Which of the following characteristics of a computer system refers to its ability to process multiple tasks concurrently by rapidly switching between them?

- Ans A. Distributed computing
 B. Real-time processing
 C. Parallel processing
 D. Multitasking

Question ID : 630680806832
Option 1 ID : 6306803160954
Option 2 ID : 6306803160956
Option 3 ID : 6306803160953
Option 4 ID : 6306803160955
Status : Answered
Chosen Option : D

Q.38 Which of the following influences an economiser's performance in waste heat recovery the most?

- Ans A. The temperature difference between the flue gases and the feedwater
 B. The size of the economiser
 C. The type of fuel used in the boiler
 D. The ambient air temperature

Question ID : 6306801004716
Option 1 ID : 6306803942734
Option 2 ID : 6306803942733
Option 3 ID : 6306803942735
Option 4 ID : 6306803942736
Status : Answered
Chosen Option : B

Q.39 What is the minimum airflow required for purging a furnace to prevent the accumulation of explosive mixture before starting a boiler?

- Ans A. 20% for 5-10 minutes
 B. 30% for 5-10 minutes
 C. 40% for 10-15 minutes
 D. 10% for 2-5 minutes

Question ID : 6306801003405
Option 1 ID : 6306803937778
Option 2 ID : 6306803937779
Option 3 ID : 6306803937780
Option 4 ID : 6306803937777
Status : Answered
Chosen Option : C

Q.40 Where is a mud drum placed in a boiler?

- Ans A. In the bottom portion
 B. In the middle portion
 C. In the corner
 D. In the upper portion

Question ID : 6306801004468
Option 1 ID : 6306803941775
Option 2 ID : 6306803941774
Option 3 ID : 6306803941776
Option 4 ID : 6306803941773
Status : Answered
Chosen Option : B

Q.41 From the steam table, one can obtain the values of various properties of:

- Ans A. superheated steam only
 B. saturated water only
 C. steam only
 D. saturated water and steam as well as for the superheated steam

Question ID : 6306801011099
Option 1 ID : 6306803967843
Option 2 ID : 6306803967841
Option 3 ID : 6306803967842
Option 4 ID : 6306803967844
Status : Answered
Chosen Option : B

Q.42 Which type of fire is caused by flammable liquids, such as gasoline and oil, and should never be extinguished with water?

- Ans A. Class C
 B. Class K
 C. Class A
 D. Class B

Question ID : 6306801004371
Option 1 ID : 6306803941391
Option 2 ID : 6306803941392
Option 3 ID : 6306803941389
Option 4 ID : 6306803941390
Status : Answered
Chosen Option : B

Q.43 Steaming Economiser is the one where the rise in feedwater temperature is greater than:

- Ans A. 57% of the difference between the feedwater inlet and saturation temperature
 B. 43% of the difference between the feedwater inlet and saturation temperature
 C. 67% of the difference between the feedwater inlet and saturation temperature
 D. 33% of the difference between the feedwater inlet and saturation temperature

Question ID : 6306801008663
Option 1 ID : 6306803958173
Option 2 ID : 6306803958172
Option 3 ID : 6306803958170
Option 4 ID : 6306803958171
Status : Answered
Chosen Option : C

Q.44 What safety measure must be taken first before igniting a boiler?

- Ans A. Ensure the fuel supply is adequate
 B. Check the water level
 C. Inspect the boiler for any visible leaks or damage
 D. Open all safety valves

Question ID : 6306801010878
Option 1 ID : 6306803966975
Option 2 ID : 6306803966974
Option 3 ID : 6306803966976
Option 4 ID : 6306803966973
Status : Answered
Chosen Option : D

Q.45 Which of the following Sections of the Boiler Code provides requirement for all methods of electric boilers?

- Ans A. Non-destructive examination
 B. Power boilers
 C. Heating boilers
 D. Materials

Question ID : 6306801008653
Option 1 ID : 6306803958133
Option 2 ID : 6306803958130
Option 3 ID : 6306803958132
Option 4 ID : 6306803958131
Status : Answered
Chosen Option : C

Q.46 The maximum flow that is obtained from a centrifugal pump without damaging the pump is called:

- Ans A. stage
 B. gland
 C. pump run out
 D. shutoff head

Question ID : 6306801010351
Option 1 ID : 6306803964909
Option 2 ID : 6306803964908
Option 3 ID : 6306803964906
Option 4 ID : 6306803964907
Status : Answered
Chosen Option : D

Q.47 In a scenario where an economiser is not functioning correctly, what is the immediate action to be taken?

- Ans A. Open the economiser bypass valve.
 B. Increase the firing rate of the boiler.
 C. Stop the feedwater pump.
 D. Increase the water level in the boiler.

Question ID : 6306801006549
Option 1 ID : 6306803949947
Option 2 ID : 6306803949946
Option 3 ID : 6306803949948
Option 4 ID : 6306803949949
Status : Answered
Chosen Option : D

Q.48 The economiser heating surface is around:

- Ans A. 200% to 250% of the boiler heating surface
 B. 125% to 150% of the boiler heating surface
 C. 80% to 90% of the boiler heating surface
 D. 25% to 40% of the boiler heating surface

Question ID : 6306801008717
Option 1 ID : 6306803958385
Option 2 ID : 6306803958384
Option 3 ID : 6306803958383
Option 4 ID : 6306803958382
Status : Answered
Chosen Option : B

Q.49 In which of the following mechanical gauges is the tube filled with a liquid that is in contact with the fluid in pipe or vessel across a diaphragm?

- Ans A. Diaphragm
 B. Dead weight
 C. Bellow
 D. Bourdon tube

Question ID : 6306801010451
Option 1 ID : 6306803965302
Option 2 ID : 6306803965304
Option 3 ID : 6306803965305
Option 4 ID : 6306803965303
Status : Answered
Chosen Option : B

Q.50 Which kind of fire extinguisher is inappropriate for use in boiler rooms during electrical fires?

- Ans A. Dry powder
 B. Foam
 C. CO₂
 D. Water

Question ID : 6306801010862
Option 1 ID : 6306803966909
Option 2 ID : 6306803966911
Option 3 ID : 6306803966910
Option 4 ID : 6306803966912
Status : Answered
Chosen Option : D

Q.51 Which type of fitting is used to connect two pipes of different sizes in a boiler plant piping system?

- Ans A. Coupling fitting
 B. Union fitting
 C. Elbow fitting
 D. Reducer fitting

Question ID : 6306801002334
Option 1 ID : 6306803933434
Option 2 ID : 6306803933433
Option 3 ID : 6306803933436
Option 4 ID : 6306803933435
Status : Answered
Chosen Option : C

Q.52 In a cooling tower, the difference between the wet bulb temperature and the outgoing cooling water temperature is known as _____.

- Ans A. evaporation rate
 B. heat transfer coefficient
 C. cooling tower approach
 D. cooling tower range

Question ID : 630680996620
Option 1 ID : 6306803910214
Option 2 ID : 6306803910215
Option 3 ID : 6306803910213
Option 4 ID : 6306803910212
Status : Answered
Chosen Option : B

Q.53 If the dryness fraction of steam is 0.75, then the wetness fraction of steam will be:

- Ans A. 0.75
 B. 0.25
 C. 0.88
 D. 1.75

Question ID : 6306801008771
Option 1 ID : 6306803958609
Option 2 ID : 6306803958607
Option 3 ID : 6306803958608
Option 4 ID : 6306803958606
Status : Answered
Chosen Option : C

Q.54 Which of the following steps is NOT correct for normalising the high-water level in a boiler drum?

- Ans A. Try to increase the drum pressure
 B. Open the blow down valve
 C. Control feedwater flow manually
 D. Increase the steaming rate

Question ID : 6306801008813
Option 1 ID : 6306803958776
Option 2 ID : 6306803958777
Option 3 ID : 6306803958774
Option 4 ID : 6306803958775
Status : Answered
Chosen Option : C

Q.55 Which of the following methods is NOT adopted to control the flow of an ID fan?

- Ans A. Variable frequency drive (VFD)
 B. Uniform speed hydraulic coupling
 C. Damper control
 D. Two-speed electric motor

Question ID : 6306801010459
Option 1 ID : 6306803965332
Option 2 ID : 6306803965330
Option 3 ID : 6306803965331
Option 4 ID : 6306803965333
Status : Answered
Chosen Option : B

Q.56 During feedwater fill-up in the boiler, after the economiser is filled up with feedwater, water enters into the:

- Ans A. evaporator
 B. water wall
 C. boiler drum
 D. preheater

Question ID : 6306801008670
Option 1 ID : 6306803958198
Option 2 ID : 6306803958200
Option 3 ID : 6306803958199
Option 4 ID : 6306803958201
Status : Answered
Chosen Option : C

Q.57 Which type of condenser is most commonly used in large power plants?

- Ans A. Evaporative condenser
 B. Jet condenser
 C. Surface condenser
 D. Air cooled condenser

Question ID : 6306801007091
Option 1 ID : 6306803952090
Option 2 ID : 6306803952091
Option 3 ID : 6306803952089
Option 4 ID : 6306803952088
Status : Answered
Chosen Option : B

Q.58 What is the principle of operation of a bimetallic temperature gauge?

- Ans A. Difference in melting point of dissimilar metals
 B. Viscosity change of a fluid with temperature
 C. Electrical resistance change in a metal alloy
 D. Mechanical deformation of a composite metal strip

Question ID : 630680996656
Option 1 ID : 6306803910356
Option 2 ID : 6306803910359
Option 3 ID : 6306803910357
Option 4 ID : 6306803910358
Status : Answered
Chosen Option : D

Q.59 What does a dark emission in the stack indicate, and how can it be corrected?

- Ans A. Incomplete combustion; reduce air supply
 B. Incomplete combustion; optimise fuel mix
 C. Excess fuel; increase air flow rate
 D. Complete combustion; no adjustment needed

Question ID : 6306801003767
Option 1 ID : 6306803939254
Option 2 ID : 6306803939255
Option 3 ID : 6306803939256
Option 4 ID : 6306803939253
Status : Answered
Chosen Option : D

Q.60 A boiler system generates 100 tons of steam per hour at a pressure of 20 bar. The feedwater enters the economiser at a temperature of 100°C and exits at 150°C. The specific heat capacity of water is 4.18 kJ/kg°C. The amount of heat recovered by the economiser per hour is:

- Ans A. 15,900,000 kJ/hr
 B. 10,900,000 kJ/hr
 C. 20,900,000 kJ/hr
 D. 12,900,000 kJ/hr

Question ID : 6306801003846
Option 1 ID : 6306803939595
Option 2 ID : 6306803939593
Option 3 ID : 6306803939596
Option 4 ID : 6306803939594
Status : Answered
Chosen Option : C

Q.61 The theoretical temperature at which all the molecular motions stop and substances possess no thermal energy, is called:

- Ans A. steam point
 B. absolute zero temperature
 C. ice point
 D. triple point

Question ID : 6306801010470
Option 1 ID : 6306803965375
Option 2 ID : 6306803965377
Option 3 ID : 6306803965374
Option 4 ID : 6306803965376
Status : Answered
Chosen Option : B

Q.62 How will the utilisation of preheated air for the combustion process be helpful to reduce smoke emission in the boiler system?

- Ans A. By cooling down the fuel before burning
 B. By increasing the temperature of the flue gases
 C. By enhancing the combustion process and reducing incomplete combustion
 D. By decreasing the efficiency of the burner

Question ID : 6306801009936
Option 1 ID : 6306803963229
Option 2 ID : 6306803963227
Option 3 ID : 6306803963230
Option 4 ID : 6306803963228
Status : Answered
Chosen Option : C

Q.63 A high-pressure steam boiler plant experiences an unexpected increase in makeup water usage. What is the most appropriate immediate action to take regarding water analysis?

- Ans
- A. Analyse the water immediately to identify potential changes in water quality
 - B. Continue with the existing water analysis schedule
 - C. Reduce the frequency of water analysis to monthly
 - D. Suspend water analysis until the makeup water usage returns to normal

Question ID : 630680996355
Option 1 ID : 6306803909154
Option 2 ID : 6306803909153
Option 3 ID : 6306803909152
Option 4 ID : 6306803909155
Status : Answered
Chosen Option : C

Q.64 What is the typical method used to perform intermittent blowdown?

- Ans
- A. Automatic pressure relief
 - B. Continuous removal of water
 - C. Manually removing water at intervals
 - D. Relieving steam through a valve

Question ID : 6306801006929
Option 1 ID : 6306803951452
Option 2 ID : 6306803951450
Option 3 ID : 6306803951451
Option 4 ID : 6306803951453
Status : Answered
Chosen Option : C

Q.65 Which of the following statements is/are correct about overcurrent relays in generator protection?

Statement 1: Instantaneous overcurrent relays operate without intentional time delay for high fault currents.
Statement 2: Time lag overcurrent relays are designed to operate instantly for low fault currents.
Statement 3: The pickup value of the instantaneous overcurrent relay is always lower than the time lag overcurrent relay.
Statement 4: Overcurrent relays are used to protect the generator from under voltage conditions.

- Ans
- A. Only Statement 1 is correct.
 - B. Statements 2 and 4 are correct.
 - C. Statements 3 and 4 are correct.
 - D. Statements 1 and 3 are correct.

Question ID : 6306801004317
Option 1 ID : 6306803941173
Option 2 ID : 6306803941175
Option 3 ID : 6306803941176
Option 4 ID : 6306803941174
Status : Answered
Chosen Option : B

Q.66 A boiler uses a shell-and-tube heat exchanger with a heat transfer area of 50 m² and a heat transfer coefficient of 130 W/m²·K. If the temperature difference between the hot and cold fluids is 40°C, what is the rate of heat transfer through the heat exchanger?

- Ans
- A. 240 KW
 - B. 520 KW
 - C. 480 KW
 - D. 260 KW

Question ID : 6306801009981
Option 1 ID : 6306803963404
Option 2 ID : 6306803963406
Option 3 ID : 6306803963405
Option 4 ID : 6306803963403
Status : Answered
Chosen Option : C

Q.67 In congruent phosphate treatment, the ratio of sodium to phosphate ions (Na/PO_4) is maintained from:

- Ans A. 0.3 : 1 to 0.9 : 1
 B. 2.3 : 1 to 2.6 : 1
 C. 1 : 1 to 1 : 1.5
 D. 3.5 : 1 to 5 : 1

Question ID : 630680101149
Option 1 ID : 6306803968037
Option 2 ID : 6306803968036
Option 3 ID : 6306803968038
Option 4 ID : 6306803968039
Status : Answered
Chosen Option : C

Q.68 Where should automatic air vents for steam systems be fitted to ensure effective removal of air?

- Ans A. In a central location, to vent air from the entire system
 B. Above the condensate level, at the end of the steam mains
 C. Below the condensate level, to capture steam and air
 D. At the start of the steam mains, before steam enters

Question ID : 6306801003443
Option 1 ID : 6306803937960
Option 2 ID : 6306803937959
Option 3 ID : 6306803937958
Option 4 ID : 6306803937957
Status : Answered
Chosen Option : C

Q.69 The difference between the temperature of cold water leaving the cooling tower and the wet bulb temperature of atmospheric air is known as:

- Ans A. drift
 B. fill
 C. approach
 D. cooling range

Question ID : 6306801010556
Option 1 ID : 6306803965707
Option 2 ID : 6306803965708
Option 3 ID : 6306803965706
Option 4 ID : 6306803965705
Status : Answered
Chosen Option : A

Q.70 Given an RTD (Resistance Temperature Device) with a resistance of $R_0 = 100 \Omega$ at 0°C and a temperature coefficient of resistance $\alpha = 0.004/^\circ\text{C}$, which of the following equations correctly represents the resistance R of the RTD at a temperature T ?

- Ans A. $R = 100 + 0.004T$
 B. $R = 100(1 + 0.004T)$
 C. $R = 100(1 + 0.04T)$
 D. $R = 100(1 - 0.004T)$

Question ID : 630680996642
Option 1 ID : 6306803910300
Option 2 ID : 6306803910301
Option 3 ID : 6306803910302
Option 4 ID : 6306803910303
Status : Answered
Chosen Option : B

Q.71 Which of the following equations gives the relation among flow rate, pressure and area of fluid flow?

- Ans A. Buoyancy equation
 B. Froude equation
 C. Hagen-Poiseuille equation
 D. Continuity equation

Question ID : 6306801010531
Option 1 ID : 6306803965607
Option 2 ID : 6306803965609
Option 3 ID : 6306803965608
Option 4 ID : 6306803965606
Status : Answered
Chosen Option : D

Q.72 Which of the following features of MS Word CANNOT be changed using the Font dialog box?

- Ans A. Font size
 B. Line spacing
 C. Font style
 D. Font color

Question ID : 6306801046245
Option 1 ID : 6306804107073
Option 2 ID : 6306804107075
Option 3 ID : 6306804107076
Option 4 ID : 6306804107074
Status : Answered
Chosen Option : B

Q.73 What is the primary purpose of a boiler feedwater pump in a thermal power plant?

- Ans A. To provide a constant and controlled flow of water to the boiler
 B. To circulate cooling water through the condenser and heat exchangers
 C. To inject chemicals and treatments into the boiler feedwater system
 D. To regulate steam pressure and flow rate entering the turbine

Question ID : 6306801004418
Option 1 ID : 6306803941579
Option 2 ID : 6306803941578
Option 3 ID : 6306803941580
Option 4 ID : 6306803941577
Status : Answered
Chosen Option : D

Q.74 What should be done right away if a boiler exhibits signs of a water shortage?

- Ans A. Open the safety valve to release steam
 B. Add cold water to the boiler quickly
 C. Increase the fuel supply to maintain pressure
 D. Shut down the boiler immediately

Question ID : 6306801009881
Option 1 ID : 6306803963009
Option 2 ID : 6306803963010
Option 3 ID : 6306803963007
Option 4 ID : 6306803963008
Status : Answered
Chosen Option : C

Q.75 In a spray condenser, why is high-purity water required for cooling?

- Ans A. To prevent corrosion of the condenser shell
 B. To prevent thermal shock in the turbine exhaust
 C. To prevent scaling and fouling of the cooling tower
 D. To prevent contamination of the feedwater supply

Question ID : 6306801002364
Option 1 ID : 6306803933577
Option 2 ID : 6306803933580
Option 3 ID : 6306803933578
Option 4 ID : 6306803933579
Status : Answered
Chosen Option : A

Section : Numerical Ability

Q.76 यदि $(x-2)$, $(x^2 + 3kx - 8k)$ का एक गुणखंड है, तो k का मान क्या है?

- Ans A. 1
 B. 3
 C. 4
 D. 2

Question ID : 630680218070
Option 1 ID : 630680846187
Option 2 ID : 630680846189
Option 3 ID : 630680846190
Option 4 ID : 630680846188
Status : Answered
Chosen Option : D

Q.77 वार्षिक साधारण ब्याज की समान दर पर चेतन ₹5400 की राशि का निवेश करता है और विपुल ₹10200 की राशि का निवेश करता है। यदि 5 वर्ष के अंत में, विपुल को चेतन से ₹960 अधिक ब्याज मिलता है, तो वार्षिक ब्याज की दर (प्रतिशत में) ज्ञात कीजिए।

- Ans A. 3
 B. 2
 C. 4
 D. 6

Question ID : 630680613596
Option 1 ID : 6306802401119
Option 2 ID : 6306802401117
Option 3 ID : 6306802401116
Option 4 ID : 6306802401118
Status : Answered
Chosen Option : C

Q.78 428 और 433 के बीच स्थित अभाज्य संख्याओं की संख्या क्या है?

- Ans A. 2
 B. 7
 C. 4
 D. 3

Question ID : 630680740967
Option 1 ID : 6306802904456
Option 2 ID : 6306802904459
Option 3 ID : 6306802904457
Option 4 ID : 6306802904458
Status : Answered
Chosen Option : A

Q.79 ₹12975 को S, B और C के बीच इस प्रकार बांटा गया है कि यदि उनके हिस्सों से क्रमशः ₹62, ₹18 और ₹15 की कटौती कर ली जाए, तो उनके पास 2 : 3 : 11 के अनुपात में धनराशि बचती है। S का हिस्सा ज्ञात कीजिए।

- Ans A. ₹1610
 B. ₹1560
 C. ₹1710
 D. ₹1760

Question ID : 6306801063176
Option 1 ID : 6306804175063
Option 2 ID : 6306804175065
Option 3 ID : 6306804175064
Option 4 ID : 6306804175066
Status : Answered
Chosen Option : C

Q.80 एक शिविर में 54 व्यक्तियों के लिए 15 दिनों का राशन है। यदि शिविर में व्यक्तियों की संख्या बढ़ाकर 90 कर दी जाए, तो वही राशन कितने दिनों में समाप्त हो जाएगा?

- Ans A. 12
 B. 9
 C. 7
 D. 8

Question ID : 6306801063165
Option 1 ID : 6306804175022
Option 2 ID : 6306804175019
Option 3 ID : 6306804175021
Option 4 ID : 6306804175020
Status : Answered
Chosen Option : B

Q.81 एक नाविक 40 km दूर एक स्थान तक नाव चलाकर 20 घंटे में वापस आता है। उसने पाया कि वह जितने समय में धारा की दिशा में 10 km तक नाव चला सकता है, उतने ही समय में धारा की विपरीत दिशा में 4 km तक नाव चला सकता है। धारा की चाल (km/h में) ज्ञात कीजिए।

- Ans A. 2.3
 B. 3.6
 C. 2.1
 D. 3.2

Question ID : 630680609395
Option 1 ID : 6306802386298
Option 2 ID : 6306802386300
Option 3 ID : 6306802386297
Option 4 ID : 6306802386299
Status : Answered
Chosen Option : A

Q.82 यदि ₹28700 को 8% वार्षिक ब्याज दर से 2 वर्षों के लिए जमा किया जाता है, तो चक्रवृद्धि ब्याज (वार्षिक रूप से चक्रवृद्धित होने वाला), और साधारण ब्याज के बीच अंतर कितना है?

- Ans
- A. ₹185.92
 - B. ₹176
 - C. ₹193.9
 - D. ₹183.68

Question ID : 630680855831
Option 1 ID : 6306803352027
Option 2 ID : 6306803352029
Option 3 ID : 6306803352028
Option 4 ID : 6306803352026
Status : Answered
Chosen Option : A

Q.83 समानुपात समीकरण (proportion equation) $57 : 15 :: 19 : x$ में x का मान ज्ञात कीजिए।

- Ans
- A. 2
 - B. 7
 - C. 4
 - D. 5

Question ID : 630680850426
Option 1 ID : 6306803330863
Option 2 ID : 6306803330864
Option 3 ID : 6306803330862
Option 4 ID : 6306803330861
Status : Answered
Chosen Option : D

Q.84 प्रथम 89 विषम प्राकृत संख्याओं का औसत कितना है?

- Ans
- A. 90
 - B. 88
 - C. 89
 - D. 44.5

Question ID : 630680551963
Option 1 ID : 6306802158078
Option 2 ID : 6306802158079
Option 3 ID : 6306802158077
Option 4 ID : 6306802158080
Status : Answered
Chosen Option : D

Q.85 एक आयत की लंबाई 6% बढ़ाई जाती है और चौड़ाई 7% घटाई जाती है। आयत के क्षेत्रफल में कितना परिवर्तन हुआ?

- Ans
- A. 1.42% की कमी
 - B. 0.42% की वृद्धि
 - C. 0.24% की वृद्धि
 - D. 1.24% की कमी

Question ID : 630680636457
Option 1 ID : 6306802491565
Option 2 ID : 6306802491562
Option 3 ID : 6306802491563
Option 4 ID : 6306802491564
Status : Answered
Chosen Option : A

Q.86 एक वस्तु की सूची-कीमत ₹2000 है और सूची-कीमत पर 10% की छूट प्रदान की जाती है। नेट विक्रय मूल्य को ₹828 तक लाने के लिए ग्राहक को पहले से ही बटुगत कीमत पर कितने प्रतिशत अतिरिक्त छूट प्रदान की जानी चाहिए?

- Ans
- A. 56
 - B. 57
 - C. 50
 - D. 54

Question ID : 630680802611
Option 1 ID : 6306803144603
Option 2 ID : 6306803144601
Option 3 ID : 6306803144602
Option 4 ID : 6306803144600
Status : Answered
Chosen Option : D

Q.87 एक ठोस घनाभ के तीन आसन्न फलकों का क्षेत्रफल 96 cm^2 , 24 cm^2 और 144 cm^2 है। घनाभ का आयतन (cm^3 में) ज्ञात कीजिए।

- Ans A. 727
 B. 631
 C. 506
 D. 576

Question ID : 630680837036
Option 1 ID : 6306803278874
Option 2 ID : 6306803278873
Option 3 ID : 6306803278872
Option 4 ID : 6306803278871
Status : Answered
Chosen Option : C

Q.88 अमित ने एक पंखा 15% के लाभ पर बेचा। यदि क्रय मूल्य 8% अधिक होता और विक्रय मूल्य ₹419 अधिक होता, तो 22% का लाभ होता। 20% का लाभ अर्जित करने के लिए अमित को पंखा किस मूल्य पर बेचना चाहिए?

- Ans A. ₹2,500
 B. ₹2,640
 C. ₹3,000
 D. ₹2,850

Question ID : 630680615288
Option 1 ID : 6306802407826
Option 2 ID : 6306802407827
Option 3 ID : 6306802407829
Option 4 ID : 6306802407828
Status : Answered
Chosen Option : B

Q.89 एक कार का ओडोमीटर, यात्रा की शुरुआत में 12100 km और यात्रा की अंत में 12460 km प्रदर्शित करता है। यदि यात्रा में 4 घंटे लगे, तो कार की औसत चाल m/sec में ज्ञात कीजिए।

- Ans A. 25
 B. 30
 C. 33
 D. 20

Question ID : 6306801063187
Option 1 ID : 6306804175107
Option 2 ID : 6306804175109
Option 3 ID : 6306804175110
Option 4 ID : 6306804175108
Status : Answered
Chosen Option : A

Q.90 दो मित्रों, अजय और अमित, की मासिक आय क्रमशः 5:7 के अनुपात में है और इनमें से प्रत्येक ₹99000 प्रति माह बचाता है। यदि इनके मासिक व्यय का अनुपात 2:3 है, तो अजय की मासिक आय (₹ में) ज्ञात करें।

- Ans A. 494000
 B. 496000
 C. 495000
 D. 693000

Question ID : 630680591846
Option 1 ID : 6306802315853
Option 2 ID : 6306802315852
Option 3 ID : 6306802315851
Option 4 ID : 6306802315854
Status : Answered
Chosen Option : B

Section : General Awareness

Q.91 मनुष्यों में X या Y गुणसूत्र की वंशागति के संबंध में, निम्नलिखित कथनों पर विचार कीजिए और सही विकल्प का चयन कीजिए।

- A. पुरुषों और महिलाओं दोनों में एक X और एक Y गुणसूत्र होता है।
B. बच्चे का लिंग, पिता द्वारा निर्धारित होता है, जिसमें X या Y गुणसूत्र में से कोई एक गुणसूत्र प्राप्त हो सकता है।

- Ans A. न तो A और न ही B सही है।
 B. केवल A सही है।
 C. केवल B सही है।
 D. A और B दोनों सही हैं।

Question ID : 630680942446
Option 1 ID : 6306803694266
Option 2 ID : 6306803694263
Option 3 ID : 6306803694264
Option 4 ID : 6306803694265
Status : Answered
Chosen Option : C

Q.92 भारतीय संविधान में निम्नलिखित में से किस संशोधन द्वारा सिंधी को आधिकारिक भाषा के रूप में शामिल किया गया था?

- Ans A. 21^{वें} संशोधन
 B. 42^{वें} संशोधन
 C. 18^{वें} संशोधन
 D. 31^{वें} संशोधन

Question ID : 630680962244
Option 1 ID : 6306803773262
Option 2 ID : 6306803773264
Option 3 ID : 6306803773261
Option 4 ID : 6306803773263
Status : Answered
Chosen Option : A

Q.93 _____ सतह से हवा में मार करने वाली मिसाइल (SAM), एक कम दूरी की सतह से हवा में मार करने वाली मिसाइल प्रणाली है, जो सुभेद्य क्षेत्रों और सुभेद्य बिंदुओं की हवाई हमलों से रक्षा करती है, जिसे जुलाई 2024 में DRDO द्वारा विकसित किया गया है।

- Ans A. अर्जुन
 B. रुद्रम
 C. आकाश
 D. शिवालिक

Question ID : 630680946297
Option 1 ID : 6306803709911
Option 2 ID : 6306803709910
Option 3 ID : 6306803709912
Option 4 ID : 6306803709909
Status : Answered
Chosen Option : B

Q.94 'यंग इंडिया (Young India)' समाचार पत्र के संस्थापक निम्नलिखित में से कौन थे?

- Ans A. महात्मा गांधी
 B. सुभाष चंद्र बोस
 C. जवाहरलाल नेहरू
 D. बाल गंगाधर तिलक

Question ID : 630680962213
Option 1 ID : 6306803773116
Option 2 ID : 6306803773113
Option 3 ID : 6306803773115
Option 4 ID : 6306803773114
Status : Answered
Chosen Option : B

Q.95 भारतीय संविधान में मौलिक कर्तव्यों को किस संशोधन द्वारा शामिल किया गया?

- Ans A. 61^{वें} संशोधन
 B. 40^{वें} संशोधन
 C. 42^{वें} संशोधन
 D. 52^{वें} संशोधन

Question ID : 630680942529
Option 1 ID : 6306803694561
Option 2 ID : 6306803694558
Option 3 ID : 6306803694559
Option 4 ID : 6306803694560
Status : Answered
Chosen Option : C

Q.96 _____, 'द ग्रेट इंडियन क्रिकेट सर्कस' पुस्तक के लेखक हैं।

- Ans
- A. अभिषेक मुखर्जी और अनिच दत्ता
 - B. जॉय भट्टाचार्य और सुरेश सावंत
 - C. अनिच दत्ता और सुरेश सावंत
 - D. जॉय भट्टाचार्य और अभिषेक मुखर्जी

Question ID : 630680946553
Option 1 ID : 6306803710931
Option 2 ID : 6306803710929
Option 3 ID : 6306803710932
Option 4 ID : 6306803710930
Status : Answered
Chosen Option : A

Q.97 भारत की जनगणना 2011 के अनुसार, निम्नलिखित में से किस राज्य में सबसे कम महिला साक्षरता दर दर्ज की गई?

- Ans
- A. आंध्र प्रदेश
 - B. झारखंड
 - C. ओडिशा
 - D. बिहार

Question ID : 630680929738
Option 1 ID : 6306803643769
Option 2 ID : 6306803643770
Option 3 ID : 6306803643768
Option 4 ID : 6306803643767
Status : Answered
Chosen Option : D

Q.98 भारतीय संविधान का कौन-सा अनुच्छेद किसी राज्य की कार्यपालक शक्ति की सीमा से संबंधित है?

- Ans
- A. अनुच्छेद 162
 - B. अनुच्छेद 167
 - C. अनुच्छेद 155
 - D. अनुच्छेद 159

Question ID : 630680942595
Option 1 ID : 6306803694820
Option 2 ID : 6306803694821
Option 3 ID : 6306803694818
Option 4 ID : 6306803694819
Status : Answered
Chosen Option : C

Q.99 फरवरी 2024 में, निम्नलिखित में से किस केंद्रीय मंत्री द्वारा 'आत्मनिर्भर तिलहन अभियान' की घोषणा की गई?

- Ans
- A. अमित शाह
 - B. निर्मला सीतारमण
 - C. नितिन जयराम गडकरी
 - D. राजनाथ सिंह

Question ID : 630680943317
Option 1 ID : 6306803697648
Option 2 ID : 6306803697647
Option 3 ID : 6306803697646
Option 4 ID : 6306803697645
Status : Answered
Chosen Option : A

Q.100 भारत के प्रायद्वीपीय पठार के पश्चिम में कौन-सा सागर है?

- Ans
- A. कैरेबियन सागर
 - B. अरब सागर
 - C. अंडमान सागर
 - D. बंगाल की खाड़ी

Question ID : 630680943333
Option 1 ID : 6306803697703
Option 2 ID : 6306803697702
Option 3 ID : 6306803697701
Option 4 ID : 6306803697704
Status : Answered
Chosen Option : B