National Testing Agency

Question Paper Name :	Mechanical Engineering 19th March 2026 Shift 2
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Duration :	90
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Mechanical Engineering

Group Number :	1
Group Id :	432449176
Group Maximum Duration :	0
Group Minimum Duration :	90
Show Attended Group? :	No
Edit Attended Group? :	No
Break time :	0
Group Marks :	300

Mechanical Engineering

Section Id :	432449270
Section Number :	1
Section type :	Online
Mandatory or Optional :	Mandatory
Number of Questions :	75
Number of Questions to be attempted :	75
Section Marks :	300
Maximum Instruction Time :	0
Sub-Section Number :	1
Sub-Section Id :	432449645
Question Shuffling Allowed :	Yes
Is Section Default? :	No

Question Number : 1 Question Id : 43244920426 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If the probability of a bad reaction from a certain injection is 0.001, then the chance that out of 2,000 individuals more than two will get a bad reaction is given by as follows :

(1) $1-\frac{5}{e^2}$

(2) $\frac{5}{e^2}$

(3) $1-\frac{2}{e^2}$

(4) $\frac{4}{e^2}$

Options :

43244980201. 1

43244980202. 2

43244980203. 3

43244980204. 4

Question Number : 2 Question Id : 43244920427 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The value of $T\left(\frac{1}{2}\right)$ is :

(1) π

(2) $\frac{\pi}{4}$

(3) $\sqrt{\pi}$

(4) $\frac{\pi}{2}$

Options :

43244980205. 1

43244980206. 2

43244980207. 3

43244980208. 4

Question Number : 3 Question Id : 43244920428 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The volume of the solid bounded by the planes $x=0$, $y=0$, $x+y+z=2$ and $z=0$ is :

(1) $\frac{4}{3}$

(2) $\frac{8}{3}$

(3) $\frac{11}{3}$

(4) $\frac{2}{3}$

Options :

43244980209. 1

43244980210. 2

43244980211. 3

43244980212. 4

Question Number : 4 Question Id : 43244920429 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The transformed equation of $\frac{\partial^2 \cup}{\partial x^2}+\frac{\partial^2 \cup}{\partial y^2}=0$ into polar coordinates is :

(1) $\frac{\partial^2 \cup}{\partial r^2}+\frac{1}{r}\frac{\partial \cup}{\partial r}+\frac{1}{r^2}\frac{\partial^2 \cup}{\partial \theta^2}=0$

(2) $\frac{\partial^2 \cup}{\partial r^2}+\frac{1}{r^2}\frac{\partial \cup}{\partial r}+\frac{1}{r}\frac{\partial^2 \cup}{\partial \theta^2}=0$

(3) $\frac{1}{r}\frac{\partial^2 \cup}{\partial r^2}+\frac{\partial \cup}{\partial r}+\frac{1}{r^2}\frac{\partial^2 \cup}{\partial \theta^2}=0$

(4) $\frac{1}{r}\frac{\partial^2 \cup}{\partial \theta^2}+\frac{\partial^2 \cup}{\partial r^2}+\frac{1}{r^2}\frac{\partial \cup}{\partial r}=0$

Options :

43244980213. 1

43244980214. 2

43244980215. 3

43244980216. 4

Question Number : 5 Question Id : 43244920430 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The value of $\int_C \left[\left(xy+y^2\right)dx+x^2dy\right]$, where C is bounded by $y=x$ and $y=x^2$ is :

(1) $-\frac{1}{20}$

(2) $\frac{1}{20}$

(3) $\frac{19}{20}$

(4) -1

Options :

43244980217. 1

43244980218. 2

43244980219. 3

43244980220. 4

Question Number : 6 Question Id : 43244920431 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Using Runge-Kutta method of fourth order, an approximate value of y at $x=0.2$, given that $\frac{dy}{dx}=\frac{y^2-x^2}{y^2+x^2}$ and $y(0)=1$ is :

(1) 1.196

(2) 1.926

(3) 1.862

(4) 2.124

Options :

43244980221. 1

43244980222. 2

43244980223. 3

43244980224. 4

Question Number : 7 Question Id : 43244920432 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The function of a governor is to :

(1) Reduce the speed of an engine

(2) Increase the speed of an engine

(3) Maintain the speed of an engine

(4) Eliminate the fluctuations in the engine

Options :

43244980225. 1

43244980226. 2

43244980227. 3

43244980228. 4

Question Number : 8 Question Id : 43244920433 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

What is the effect of mass of spring (m_1) on the equivalent mass M of a spring (k) and mass (m) system ?

(1) $M = m + \frac{m_1}{3}$

(2) $M = \frac{m}{3} + m_1$

(3) $M = m + m_1$

(4) $M = \frac{m + m_1}{3}$

Options :

43244980229. 1

43244980230. 2

43244980231. 3

43244980232. 4

Question Number : 9 Question Id : 43244920434 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

According to maximum shear stress theory, the yield strength in shear (τ_s) and yield strength in tension (σ_t) is related as :

(1) $\tau_s = \sigma_t$

(2) $\tau_s = \frac{\sigma_t}{2}$

(3) $\sigma_t = \frac{\tau_s}{2}$

(4) $\tau_s = \frac{\sigma_t}{\sqrt{2}}$

Options :

43244980233. 1

43244980234. 2

43244980235. 3

43244980236. 4

Question Number : 10 Question Id : 43244920435 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A shaft was initially subjected to Bending moment and then was subjected to Torsion. If the magnitude of bending moment is found to be the same as that of the torque, the ratio of maximum bending stress to shear stress would be :

(1) 0.50

(2) 0.25

(3) 2.0

(4) 4.0

Options :

43244980237. 1

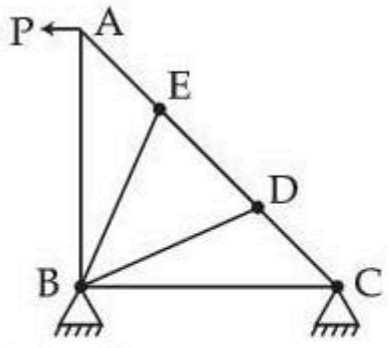
43244980238. 2

43244980239. 3

43244980240. 4

Question Number : 11 Question Id : 43244920436 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

How many zero force members are there in a truss shown in figure ?



(1) 0
(2) 1
(3) 2
(4) 3

Options :

43244980241. 1

43244980242. 2

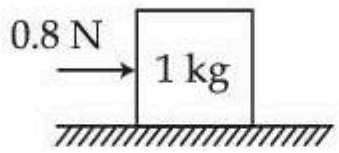
43244980243. 3

43244980244. 4

Question Number : 12 Question Id : 43244920437 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A 1 kg block is resting on a surface with coefficient of friction $\mu = 0.1$. A force of 8N is applied to the block as shown in figure.

The friction force is :



(1) 0 N
(2) 0.8 N
(3) 1.2 N
(4) 2 N

Options :

43244980245. 1

43244980246. 2

43244980247. 3

43244980248. 4

Question Number : 13 Question Id : 43244920438 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The speed of sound of carbon monoxide (CO) at 200 KPa pressure and 300°C in m/s is :
[The properties of CO can be taken as, molecular weight = 28.01, k=1.4]

(1) 452 m/s
(2) 398 m/s
(3) 488 m/s
(4) 367 m/s

Options :

43244980249. 1

43244980250. 2

43244980251. 3

43244980252. 4

Question Number : 14 Question Id : 43244920439 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Power required in overcoming the viscous resistance in case of shaft in oiled bearing is :

where μ = coefficient of viscosity, D = Diameter of shaft

N = angular velocity of shaft in R.P.M., l = length of the shaft

t = thickness of the oil

(1) $\frac{\mu\pi^3 D^3 N^2 l}{1800t}$

(2) $\frac{\mu\pi^3 D^3 N^2 l}{3600t}$

(3) $\frac{\mu\pi^3 N^2 R^4 l}{1800t}$

(4) $\frac{\mu\pi^3 N^2 R^4 l}{3600t}$

Options :

43244980253. 1

43244980254. 2

43244980255. 3

43244980256. 4

Question Number : 15 Question Id : 43244920440 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

For a hemispherical furnace with a flat circular base of diameter, 'D', the view factor from dome to its base is :

(1) 0.5

(2) 1

(3) 0

(4) 0.32

Options :

43244980257. 1

43244980258. 2

43244980259. 3

43244980260. 4

Question Number : 16 Question Id : 43244920441 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

If a body is at 1727°C, the wavelength at which the body emits maximum amount of radiation is :

(1) 1.45 μm

(2) 1.45 cm

(3) 0.450 μm

(4) 0.457 cm

Options :

43244980261. 1

43244980262. 2

43244980263. 3

43244980264. 4

Question Number : 17 Question Id : 43244920442 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A petrol engine has compression ratio from :

(1) 6 to 10

(2) 10 to 15

(3) 15 to 25

(4) 25 to 40

Options :

43244980265. 1
43244980266. 2
43244980267. 3
43244980268. 4

Question Number : 18 Question Id : 43244920443 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The difference between dry bulb temperature and wet bulb temperature is called :

(1) dry bulb depression
(2) wet bulb depression
(3) dew point depression
(4) degree of saturation

Options :

43244980269. 1
43244980270. 2
43244980271. 3
43244980272. 4

Question Number : 19 Question Id : 43244920444 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Green Sand mould indicates that :

(1) Polymeric Mould has been cured
(2) Mould has been totally dried
(3) Mould is green in colour
(4) Mould contains moisture

Options :

43244980273. 1
43244980274. 2
43244980275. 3
43244980276. 4

Question Number : 20 Question Id : 43244920445 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Two identical circular rods of the same diameter and length are subjected to the same magnitude of axial tensile force. One of the rod is made out of mild steel and other is made of aluminium. Assume both materials to be homogeneous and isotropic and axial force causes the same amount of uniform stress in both the rods. The stresses developed are within proportional limit of respective materials. Which of the following observations is correct. [Young's modulus, E for steel = 200 G Pa Aluminum = 70 G Pa] :

(1) Both rods elongate by the same amount
(2) Mild steel rod elongates more than the Aluminum
(3) Aluminium rod elongates more than mild steel rod
(4) As the stresses are equal, strains are also equal in both the rods

Options :

43244980277. 1
43244980278. 2
43244980279. 3
43244980280. 4

Question Number : 21 Question Id : 43244920446 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Tolerances are specified in manufacturing parts :

(1) to obtain desired fit
(2) to allow inexactness of dimensions in manufacturing
(3) to achieve proper allowances
(4) none of the above

Options :

43244980281. 1
43244980282. 2
43244980283. 3
43244980284. 4

Question Number : 22 Question Id : 43244920447 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In a machining operation, doubling the cutting speed reduces the tool life to $\frac{1}{8}^{th}$ of the original value. The exponent 'n' in Taylor's tool life equation $VT^n = C$ is :

(1) 1/8
(2) 1/4
(3) 1/3
(4) 1/2

Options :

43244980285. 1
43244980286. 2
43244980287. 3
43244980288. 4

Question Number : 23 Question Id : 43244920448 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The lead time is defined as :

(1) The time between placing an order and its delivery
(2) The time between two consecutive placements of order
(3) The time between replenishment and zero stock
(4) The time between the placing an order and zero stock

Options :

43244980289. 1
43244980290. 2
43244980291. 3
43244980292. 4

Question Number : 24 Question Id : 43244920449 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In a CNC machine tool, encoder is used to sense and control :

(1) Table position
(2) Table angular velocity
(3) Table speed
(4) Coolant flow

Options :

43244980293. 1
43244980294. 2
43244980295. 3
43244980296. 4

Question Number : 25 Question Id : 43244920450 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The tactile sensor is used to measure :

(1) Position
(2) Pressure
(3) Force
(4) Velocity

Options :

43244980297. 1
43244980298. 2
43244980299. 3

43244980300. 4

Question Number : 26 Question Id : 43244920451 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In sensors, the response time is the time required :

(1) to measure accuracy

(2) to measure difference between measured and actual values

(3) to respond completely to change in input

(4) to respond to difference in values between two successive measurement

Options :

43244980301. 1

43244980302. 2

43244980303. 3

43244980304. 4

Question Number : 27 Question Id : 43244920452 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

When a control Signal is generated proportional to rate of change of position error, the controller is :

(1) Proportional Controller

(2) Derivative Controller

(3) Integral Controller

(4) Two-step Controller

Options :

43244980305. 1

43244980306. 2

43244980307. 3

43244980308. 4

Question Number : 28 Question Id : 43244920453 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which type of robot possesses two revolute and one prismatic joint ?

(1) Cartesian

(2) Cylindrical

(3) Spherical

(4) Revolute

Options :

43244980309. 1

43244980310. 2

43244980311. 3

43244980312. 4

Question Number : 29 Question Id : 43244920454 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

How many degree of freedom is possessed by a manipulators link free in a 3-D space ?

(1) 3

(2) 4

(3) 5

(4) 6

Options :

43244980313. 1

43244980314. 2

43244980315. 3

43244980316. 4

Question Number : 30 Question Id : 43244920455 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which task of vision systems recognize and classify an object ?

(1) Inspection

(2) Visual servoing

(3) Identification

(4) Navigation Control

Options :

43244980317. 1

43244980318. 2

43244980319. 3

43244980320. 4

Question Number : 31 Question Id : 43244920456 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : If $P=\begin{bmatrix}1 & 4\\ 2 & 3\end{bmatrix}$, then $P^2-4P-5I=0$.

Reason (R) : Every square matrix satisfies its own characteristic equation.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

43244980321. 1

43244980322. 2

43244980323. 3

43244980324. 4

Question Number : 32 Question Id : 43244920457 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : Any square matrix P and its transpose P' have the same eigen values.

Reason (R) : The eigen values of an idempotent matrix are either zero or unity.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

43244980325. 1

43244980326. 2

43244980327. 3

43244980328. 4

Question Number : 33 Question Id : 43244920458 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : Transmissibility is the ratio of force applied to the force transmitted.

Reason (R) : Transmissibility is a measure of the effectiveness of the vibration isolating material.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

43244980329. 1

43244980330. 2

43244980331. 3

43244980332. 4

Question Number : 34 Question Id : 43244920459 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : When a component is subjected to fluctuating stresses, Goodman line is more safe from design considerations.

Reason (R) : Goodman line is completely inside the Gerber Parabola and inside the failure points.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

43244980333. 1

43244980334. 2

43244980335. 3

43244980336. 4

Question Number : 35 Question Id : 43244920460 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : In a power plant working on a Rankine Cycle, the regenerative feed water heating improves the efficiency of the steam turbine.

Reason (R) : The regenerative feed water heating raises the average temperature of heat addition in the Rankine Cycle.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

43244980337. 1

43244980338. 2

43244980339. 3

43244980340. 4

Question Number : 36 Question Id : 43244920461 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : When a thin flat plate is held parallel to a fluid stream, both pressure drag as well as viscous drag will be negligible.

Reason (R) : The total drag on the plate will be entirely due to shear stress and pressure drag will be negligible.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

43244980341. 1

43244980342. 2

43244980343. 3

43244980344. 4

Question Number : 37 Question Id : 43244920462 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : Aluminium has poor weldability.

Reason (R) : Aluminium has high thermal conductivity and high affinity to oxygen.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

43244980345. 1

43244980346. 2

43244980347. 3

43244980348. 4

Question Number : 38 Question Id : 43244920463 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : In Electrical Discharge Machining (EDM), fragile parts can be machined without distortion because no mechanical work is involved.

Reason (R) : The surface finish of the finished components made using EDM is poor because of presence of small craters.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

43244980349. 1

43244980350. 2

43244980351. 3

43244980352. 4

Question Number : 39 Question Id : 43244920464 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Given below are two statements : one is labelled as **Assertion (A)** and the other is labelled as **Reason (R)**.

Assertion (A) : Hydraulic Robots are used in heavy payload applications.

Reason (R) : Hydraulic Robots have high power to size ratios.

In the light of the above statements, choose the **most appropriate answer** from the options given below :

(1) Both **(A)** and **(R)** are correct and **(R)** is the correct explanation of **(A)**

(2) Both **(A)** and **(R)** are correct but **(R)** is **not** the correct explanation of **(A)**

(3) **(A)** is correct but **(R)** is not correct

(4) **(A)** is not correct but **(R)** is correct

Options :

43244980353. 1

43244980354. 2

43244980355. 3

43244980356. 4

Question Number : 40 Question Id : 43244920465 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A problem in Mathematics is given to three students P, Q and R whose chances of solving it are $\frac{1}{2}$, $\frac{1}{3}$ and $\frac{1}{4}$, respectively. Arrange the following probabilities in decreasing order :

A. The probability that P cannot solve the problem

B. The probability that Q cannot solve the problem

C. The probability that P, Q and R cannot solve the problem

D. The probability that the problem will be solved by at least one student

Choose the **correct** answer from the options given below :

(1) A, B, C, D

(2) B, C, D, A

(3) D, A, B, C

(4) D, B, A, C

Options :

43244980357. 1

43244980358. 2

43244980359. 3

43244980360. 4

Question Number : 41 Question Id : 43244920466 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A variate X has the probability distribution

x	-3	6	9
$P(X=x)$	$\frac{1}{6}$	$\frac{1}{2}$	$\frac{1}{3}$

Arrange the following in increasing order :

A. $E(X)$

B. $E(X^2)$

C. $E[(2X+1)^2]$

D. σ^2

Choose the **correct** answer from the options given below :

(1) A, B, C, D

(2) B, C, D, A

(3) B, D, C, A

(4) A, D, B, C

Options :

43244980361. 1

43244980362. 2

43244980363. 3

43244980364. 4

Question Number : 42 Question Id : 43244920467 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Arrange the following steps in **correct** sequence to construct Mohr's circle for a given plane stress $(\sigma_x, \sigma_y, \tau_{xy})$:

A. Plot center of a circle at $\left(\frac{\sigma_x+\sigma_y}{2}, 0\right)$

B. Identify the principal stresses as the horizontal intercept of the circle

C. Plot point X $(\sigma_x, -\tau_{xy})$ and Y (σ_x, τ_{xy}) on $\sigma-\tau$ plane

D. Connect point X and Y and draw a circle

Choose the **correct** answer from the options given below :

(1) C, A, D, B

(2) A, D, B, C

(3) C, A, B, D

(4) A, C, D, B

Options :

43244980365. 1

43244980366. 2

43244980367. 3

43244980368. 4

Question Number : 43 Question Id : 43244920468 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The **correct** order of effective length (l_e) of the column for the following support condition is :

A. Pinned - Pinned ends

B. Fixed - Free ends

C. Fixed - Fixed ends

D. Pinned - Fixed ends

Choose the **correct** answer from the options given below :

(1) A > B > C > D

(2) B > A > D > C

(3) C > B > A > D

(4) D > C > A > B

Options :

43244980369. 1

43244980370. 2

43244980371. 3

43244980372. 4

Question Number : 44 Question Id : 43244920469 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

What is the **correct** sequence of inversion of a Slider crank chain from first inversion to fourth inversion ?

A. Rotary Engine

B. Reciprocating Engine

C. Oscillating Cylinder Engine

D. Hand pump

Choose the **correct** answer from the options given below :

(1) A, C, B, D

(2) B, A, C, D

(3) A, B, C, D

(4) B, C, A, D

Options :

43244980373. 1

43244980374. 2

43244980375. 3

43244980376. 4

Question Number : 45 Question Id : 43244920470 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

A hydraulic power station has the following major items in the hydraulic circuit. The **correct** sequence of these items in the direction of flow is :

A. Draft tube

B. Runner

C. Guide wheel

D. Penstock

E. Scrol case

Choose the **correct** answer from the options given below :

(1) D, B, C, A, E

(2) A, B, C, E, D

(3) D, C, B, E, A

(4) A, C, B, D, E

Options :

43244980377. 1

43244980378. 2

43244980379. 3

43244980380. 4

Question Number : 46 Question Id : 43244920471 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In modern steam generator, the **correct** path of gases from boiler furnace to chimney is :

A. Boiler furnace

B. Economizer

C. Superheater

D. Air preheater

E. Chimney

Choose the **correct** answer from the options given below :

(1) A, C, B, D, E

(2) A, B, C, D, E

(3) A, C, D, B, E

(4) A, B, D, C, E

Options :

43244980381. 1

43244980382. 2

43244980383. 3

43244980384. 4

Question Number : 47 Question Id : 43244920472 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Arrange the fluids in their decreasing order of heat transfer coefficient 'h' in forced convection regime for similar operating conditions :

A. Air

B. Water

C. Mercury

D. Boiling water

Choose the **correct** answer from the options given below :

(1) D > C > B > A

(2) C > D > A > B

(3) A > B > C > D

(4) B > A > D > C

Options :

43244980385. 1

43244980386. 2

43244980387. 3

43244980388. 4

Question Number : 48 Question Id : 43244920473 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

What is the **correct** order of the development of the following ?

A. Computer Numerical Control

B. Numerical Control

C. Distributed Numerical Control

D. Direct Numerical Control

Choose the **correct** answer from the options given below :

(1) B, A, D, C

(2) A, B, C, D

(3) D, B, A, C

(4) C, D, B, A

Options :

43244980389. 1

43244980390. 2

43244980391. 3

43244980392. 4

Question Number : 49 Question Id : 43244920474 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Choose the **correct** order of different alloying elements present in stainless steel based on their percentage composition :

A. Ni (Nickel)

B. Fe (Iron)

C. Cr (Chromium)

D. C (Carbon)

Choose the **correct** answer from the options given below :

(1) Fe > Ni > Cr > C

(2) C > Cr > Fe > Ni

(3) Cr > C > Ni > Cr

(4) Fe > Cr > Ni > C

Options :

43244980393. 1

43244980394. 2

43244980395. 3

43244980396. 4

Question Number : 50 Question Id : 43244920475 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

What is the **correct** order of Hydraulic actuator components arranged in Hydraulic circuit ?

A. Check valve

B. Oil Reservoir

C. Hydraulic pump

D. Filter

E. Direction Control Valve

Choose the **correct** answer from the options given below :

(1) B, C, D, A, E

(2) C, B, D, A, E

(3) C, D, B, E, A

(4) B, D, C, E, A

Options :

43244980397. 1

43244980398. 2

43244980399. 3

43244980400. 4

Question Number : 51 Question Id : 43244920476 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

What is the **correct** sequence of assembly operation of peg-in-hole assembly ?

A. Hole crossing

B. Two-point contact

C. Approach

D. One-point contact

Choose the **correct** answer from the options given below :

(1) A, C, B, D

(2) A, B, C, D

(3) C, A, D, B

(4) C, D, A, B

Options :

43244980401. 1

43244980402. 2

43244980403. 3

43244980404. 4

Question Number : 52 Question Id : 43244920477 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the followings are not the solution of $\frac{\partial^2 z}{\partial x^2} = \frac{\partial^2 z}{\partial y^2}$

A. $z = f_1(y+x) + f_2(y-x)$

B. $z = f_1(y+x) + f_1(y-x)$

C. $z = f(x^2 - y^2)$

D. $z = f(x^2 + y^2)$

Choose the **correct** answer from the options given below :

(1) A, B and C only

(2) B, C and D only

(3) A, C and D only

(4) A, B and D only

Options :

43244980405. 1

43244980406. 2

43244980407. 3

43244980408. 4

Question Number : 53 Question Id : 43244920478 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following are false about the differential equation $(y^2 e^{xy^2} + 6x)dx + (2xye^{xy^2} - 4y)dy = 0$?

A. linear, homogeneous and exact

B. non-linear, homogenous and exact

C. non-linear, non-homogenous and exact

D. non-linear, non-homogenous and inexact

Choose the **correct** answer from the options given below :

(1) A, B and C only

(2) B, C and D only

(3) A, B and D only

(4) A, C and D only

Options :

43244980409. 1

43244980410. 2

43244980411. 3

43244980412. 4

Question Number : 54 Question Id : 43244920479 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following assumptions are valid for truss members ?

A. Weight of the members are considered for analysis

B. Force are transmitted through smooth pins between the members

C. Each truss is composed of flexible members

D. All the loads are applied at the joints

Choose the **most appropriate** answer from the options given below :

(1) A and B only

(2) A and C only

(3) B and D only

(4) B, C and D only

Options :

43244980413. 1

43244980414. 2

43244980415. 3
43244980416. 4

Question Number : 55 Question Id : 43244920480 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

For an underdamped system :

A. Damping ratio is unity

B. Motion is periodic

C. System stop within least possible time

D. System vibrate with damped natural frequency

Choose the **most appropriate** answer from the options given below :

(1) C and D only

(2) A and C only

(3) B and D only

(4) A, B and D only

Options :

43244980417. 1
43244980418. 2
43244980419. 3
43244980420. 4

Question Number : 56 Question Id : 43244920481 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

When a component subjected to varying load (sinusoidal), which of the following statements are **correct** ?

A. Mean stress is zero for fluctuating stress

B. Minimum stress is zero for repeated stress

C. Mean stress is zero for reversed stress

D. Amplitude stress is the average of minimum and maximum stress

Choose the **most appropriate** answer from the options given below :

(1) A and B only

(2) B and C only

(3) C and D only

(4) B, C and D only

Options :

43244980421. 1
43244980422. 2
43244980423. 3
43244980424. 4

Question Number : 57 Question Id : 43244920482 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following are intensive properties ?

A. Kinetic energy

B. Thermal conductivity

C. Pressure

D. Entropy

E. Volume

Choose the **most appropriate** answer from the options given below :

(1) A and B only

(2) B, C and D only

(3) B and C only

(4) C and E only

Options :

43244980425. 1

43244980426. 2
43244980427. 3
43244980428. 4

Question Number : 58 Question Id : 43244920483 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Bernoulli's equation $\frac{P}{\gamma}+\frac{V^2}{2g}+Z=$ constant is valid for :

A. Incompressible flow
B. Steady flow
C. Viscous fluid flow
D. Flow along a streamline
E. Rotational flow

Choose the **most appropriate** answer from the options given below :

(1) A, B and E only
(2) A, B and D only
(3) A, C and D only
(4) A, B and C only

Options :

43244980429. 1
43244980430. 2
43244980431. 3
43244980432. 4

Question Number : 59 Question Id : 43244920484 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

The occurrence of casting defect "rat tail" is possible because of :

A. soft ramming of sand
B. continuous large flat surface on the mould
C. excessive hardness of the mould
D. Hard ramming of sand

Choose the **correct** answer from the options given below :

(1) A and B only
(2) B and C only
(3) A and C only
(4) B and D only

Options :

43244980433. 1
43244980434. 2
43244980435. 3
43244980436. 4

Question Number : 60 Question Id : 43244920485 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which type of motor is used in axis or spindle drives of CNC machine tools ?

A. Induction motor
B. Stepper motor
C. D.C. servo motor
D. Linear servo motor

Choose the **correct** answer from the options given below :

(1) A only
(2) B and D only
(3) B and C only
(4) B only

Options :

43244980437. 1

43244980438. 2

43244980439. 3

43244980440. 4

Question Number : 61 Question Id : 43244920486 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

In transportation problem, North-West corner method would yield :

A. an optimum solution

B. an initial feasible solution

C. an initial non-feasible solution

D. Vogel's approximate solution

Choose the **correct** answer from the options given below :

(1) A only

(2) B only

(3) C and B only

(4) B and D only

Options :

43244980441. 1

43244980442. 2

43244980443. 3

43244980444. 4

Question Number : 62 Question Id : 43244920487 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following are External Sensors ?

A. Tachometer sensor

B. Ultrasonic sensors

C. Laser sensors

D. Vision sensors

E. Potentiometer sensors

Choose the **correct** answer from the options given below :

(1) A, B and C only

(2) B, C and D only

(3) C, D and E only

(4) A, D and E only

Options :

43244980445. 1

43244980446. 2

43244980447. 3

43244980448. 4

Question Number : 63 Question Id : 43244920488 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Which of the following terms are related to active compliance provided in a robot to **correct** lateral and angular errors ?

A. Controller

B. Remote Centre Compliance

C. Software

D. Sensors

Choose the **correct** answer from the options given below :

(1) A, B and C only

(2) B, C and D only

(3) C, D and A only

(4) A, B and D only

Options :

43244980449. 1

43244980450. 2

43244980451. 3

43244980452. 4

Question Number : 64 Question Id : 43244920489 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Match **List - I** with **List - II**.

	List - I (Method)		**List - II (Rate of convergence)**
A.	Bisection method	I.	2
B.	Secant method	II.	1
C.	Newton-Raphson method	III.	1.84
D.	Muller method	IV.	1.618

Choose the **correct** answer from the options given below :

(1) A-II, B-IV, C-I, D-III

(2) A-IV, B-II, C-I, D-III

(3) A-II, B-IV, C-III, D-I

(4) A-I, B-II, C-III, D-IV

Options :

43244980453. 1

43244980454. 2

43244980455. 3

43244980456. 4

Question Number : 65 Question Id : 43244920490 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Match **List - I** with **List - II.**

List - I (Complex integrate)		**List - II (Value)**	
A.	$\int_0^{\frac{\pi}{2}} \cos^2 z dz$	I.	$4\pi i$
B.	$\int_0^{\pi+i} z\cos 2z$	II.	0
C.	$\oint_C z dz$ where C is a simple closed curve	III.	$\frac{\pi}{4}$
D.	$\oint_C z^{-2} dz$ around the circle $\lvert z-1\rvert=1$	IV.	$\frac{1}{4}\cosh 2-\frac{1}{2}\sinh 2+\frac{1}{2}\pi i \sinh 2$

Choose the **correct** answer from the options given below :

(1) A-I, B-II, C-III, D-IV

(2) A-III, B-IV, C-II, D-I

(3) A-III, B-IV, C-I, D-II

(4) A-IV, B-III, C-II, D-I

Options :

43244980457. 1

43244980458. 2

43244980459. 3

43244980460. 4

Question Number : 66 Question Id : 43244920491 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Match **List - I** with **List - II.**

List - I (Cauchy Integral)		**List - II (Value)**	
A.	$\oint_C \frac{\sin \pi z^2+\cos \pi z^2}{(z-1)(z-2)} dz$, where C is the circle $\lvert z\rvert=3$	I.	$\frac{8\pi i e^{-2}}{3}$
B.	$\oint_C \frac{e^{2z}}{(z+1)^4} dz$, where C is the circle $\lvert z\rvert=3$	II.	$4\pi i$
C.	$\oint_C \frac{e^z}{\left(z^2+\pi^2\right)^2} dz$ where C is the circle $\lvert z\rvert=4$	III.	$\frac{\pi i}{32}$
D.	$\oint_C \frac{\sin^6 z}{z-\frac{\pi}{6}} dz$ where C is the circle $\lvert z\rvert=1$	IV.	$\frac{i}{\pi}$

Choose the **correct** answer from the options given below :

(1) A-II, B-I, C-IV, D-III

(2) A-I, B-II, C-IV, D-III

(3) A-II, B-I, C-III, D-IV

(4) A-I, B-II, C-III, D-IV

Options :

43244980461. 1

43244980462. 2
43244980463. 3
43244980464. 4

Question Number : 67 Question Id : 43244920492 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Match **List - I** with **List - II**.

	List - I		**List - II**
A.	Scott-Russel Mechanism	I.	Intermittent motion
B.	Geneva Mechanism	II.	Quick Return motion
C.	Off set slider Crank Mechanism	III.	Simple Harmonic motion
D.	Scotch Yoke Mechanism	IV.	Straight line motion

Choose the **correct** answer from the options given below :

(1) A-III, B-I, C-IV, D-II
(2) A-III, B-IV, C-I, D-II
(3) A-IV, B-I, C-II, D-III
(4) A-IV, B-II, C-I, D-III

Options :

43244980465. 1
43244980466. 2
43244980467. 3
43244980468. 4

Question Number : 68 Question Id : 43244920493 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Match **List - I** with **List - II**.

	List - I		**List - II**
A.	Toughness	I.	Moment Area Method
B.	Endurance Strength	II.	Hardness
C.	Resistance to Abrasion	III.	Energy Absorbed before fracture in tension test
D.	Deflection in beam	IV.	Fatigue Loading

Choose the **correct** answer from the options given below :

(1) A-IV, B-III, C-II, D-I
(2) A-IV, B-III, C-I, D-II
(3) A-III, B-IV, C-I, D-II
(4) A-III, B-IV, C-II, D-I

Options :

43244980469. 1
43244980470. 2
43244980471. 3
43244980472. 4

Question Number : 69 Question Id : 43244920494 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Match **List - I** with **List - II**.

	List - I		List - II
A.	Lewis number (Le)	I.	Ratio of advection to conduction heat transfer rates
B.	Peclet number (Pe)	II.	Ratio of convection to pure conduction heat transfer
C.	Sherwood number (Sh)	III.	Ratio of thermal and mass diffusivities
D.	Nusselt number (Nu)	IV.	Ratio of convection to pure diffusion mass transfer

Choose the **correct** answer from the options given below :

(1) A-III, B-IV, C-II, D-I

(2) A-II, B-III, C-IV, D-I

(3) A-III, B-I, C-IV, D-II

(4) A-I, B-IV, C-II, D-III

Options :

43244980473. 1

43244980474. 2

43244980475. 3

43244980476. 4

Question Number : 70 Question Id : 43244920495 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Match **List - I** with **List - II**. In case of 4-stroke petrol engine -

	List - I		List - II
A.	Inlet Valve Opens (IVO)	I.	$10° - 15°$ after Top Dead Centre (TDC)
B.	Inlet Valve Closes (IVC)	II.	$30° - 40°$ after Bottom Dead Centre (BDC)
C.	Exit Valve Opens (EVO)	III.	$10° - 20°$ before Top Dead Centre (TDC)
D.	Exit Valve Closes (EVC)	IV.	$30° - 50°$ before Bottom Dead Centre (BDC)

Choose the **correct** answer from the options given below :

(1) A-I, B-IV, C-II, D-III

(2) A-III, B-II, C-IV, D-I

(3) A-II, B-III, C-I, D-IV

(4) A-IV, B-I, C-III, D-II

Options :

43244980477. 1

43244980478. 2

43244980479. 3

43244980480. 4

Question Number : 71 Question Id : 43244920496 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Match **List - I** with **List - II**.

	List - I		List - II
A.	50% reaction stage	I.	Rateau
B.	Pressure - velocity compounded impulse turbine	II.	Parson
C.	Single stage impulse	III.	Curtis
D.	Two stage pressure compounded turbine	IV.	De-Laval

Choose the **correct** answer from the options given below :

(1) A-I, B-III, C-II, D-IV

(2) A-II, B-III, C-IV, D-I

(3) A-III, B-I, C-IV, D-II

(4) A-IV, B-II, C-I, D-III

Options :

43244980481. 1

43244980482. 2

43244980483. 3

43244980484. 4

Question Number : 72 Question Id : 43244920497 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Match **List - I** with **List - II**.

	List - I		**List - II**
A.	Dummy activity	I.	Follow β - distribution
B.	Critical path	II.	It is built on activity oriented diagram
C.	PERT activity	III.	Constructed only to establish sequence
D.	Critical Path Method	IV.	Has zero total slack

Choose the **correct** answer from the options given below :

(1) A-IV, B-II, C-III, D-I

(2) A-III, B-IV, C-II, D-I

(3) A-IV, B-II, C-I, D-III

(4) A-III, B-IV, C-I, D-II

Options :

43244980485. 1

43244980486. 2

43244980487. 3

43244980488. 4

Question Number : 73 Question Id : 43244920498 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Match **List - I** with **List - II**.

	List - I		**List - II**
A.	Gun metal	I.	Nickel - 68%, Copper - 29%, Others 3%
B.	Monel metal	II.	Nickel - 65%, Chromium - 15%, Iron 20%
C.	Inconel	III.	Copper - 88%, Tin - 10%, Zinc 2%
D.	Nichrome	IV.	Nickel - 80%, Chromium 14%, Iron 6%

Choose the **correct** answer from the options given below :

(1) A-IV, B-III, C-II, D-I

(2) A-III, B-I, C-IV, D-II

(3) A-I, B-IV, C-III, D-II

(4) A-II, B-III, C-I, D-IV

Options :

43244980489. 1

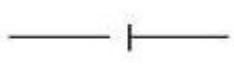
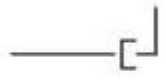
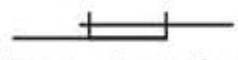
43244980490. 2

43244980491. 3

43244980492. 4

Question Number : 74 Question Id : 43244920499 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Match **List - I** with **List - II**.

	List - I (Joint types)		**List - II (Joint symbols)**
A.	Revolute	I.	
B.	Prismatic	II.	
C.	Rotary	III.	
D.	Twist	IV.	

Choose the **correct** answer from the options given below :

(1) A-III, B-I, C-II, D-IV

(2) A-III, B-IV, C-II, D-I

(3) A-II, B-I, C-III, D-IV

(4) A-II, B-III, C-IV, D-I

Options :

43244980493. 1

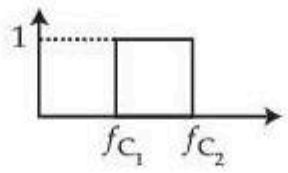
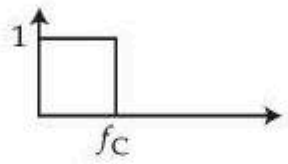
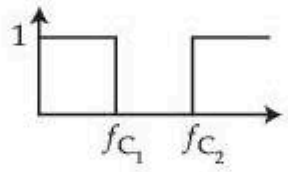
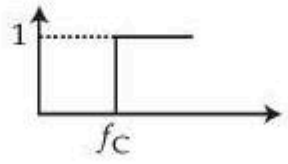
43244980494. 2

43244980495. 3

43244980496. 4

Question Number : 75 Question Id : 43244920500 Question Type : MCQ Option Shuffling : No Display Question Number : Yes Is Question Mandatory : No Single Line Question Option : No Option Orientation : Vertical

Match **List - I** with **List - II**. Match the following filter characteristics with graph showing frequency versus magnitude along x and y axis, respectively :

List - I		**List - II**	
A.	Low pass filter	I.	
B.	High pass filter	II.	
C.	Band-pass filter	III.	
D.	Band-reject filter	IV.	

Choose the **correct** answer from the options given below :

(1) A-III, B-II, C-I, D-IV

(2) A-III, B-IV, C-II, D-I

(3) A-II, B-IV, C-I, D-III

(4) A-II, B-I, C-III, D-IV

Options :

43244980497. 1

43244980498. 2

43244980499. 3

43244980500. 4