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2007, OUTRAM LINES, 1ST FLOOR, NEAR GTB NAGAR METRO STATION, GATE NO. - 2, DELHI-110009

Answer-key & Solution

*SSC JE Mechanical
MOCK -(73)
Date 20 / 11 / 2016*

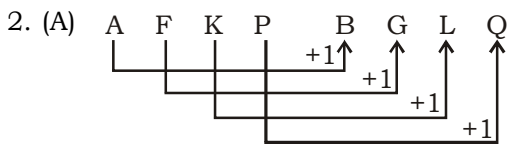
1. B	26. D	51. C	76. A	101. A	126. A	151. B	176. D
2. A	27. B	52. C	77. A	102. D	127. C	152. D	177. A
3. A	28. C	53. B	78. A	103. B	128. D	153. A	178. A
4. C	29. D	54. B	79. C	104. D	129. B	154. C	179. D
5. C	30. C	55. C	80. B	105. A	130. D	155. C	180. C
6. B	31. D	56. A	81. A	106. D	131. C	156. C	181. B
7. A	32. D	57. A	82. D	107. D	132. C	157. B	182. C
8. D	33. *	58. A	83. B	108. C	133. A	158. C	183. D
9. C	34. D	59. A	84. C	109. B	134. B	159. A	184. B
10. C	35. D	60. D	85. B	110. C	135. C	160. D	185. D
11. A	36. B	61. C	86. C	111. A	136. A	161. A	186. A
12. D	37. A	62. C	87. D	112. C	137. A	162. A	187. C
13. D	38. B	63. C	88. A	113. A	138. D	163. D	188. B
14. D	39. B	64. A	89. B	114. D	139. D	164. A	189. C
15. B	40. C	65. A	90. B	115. B	140. B	165. B	190. B
16. D	41. C	66. C	91. D	116. B	141. A	166. A	191. C
17. A	42. D	67. C	92. A	117. C	142. D	167. C	192. B
18. C	43. C	68. B	93. B	118. B	143. B	168. D	193. D
19. C	44. C	69. D	94. A	119. A	144. D	169. C	194. B
20. D	45. C	70. A	95. A	120. D	145. B	170. B	195. C
21. A	46. B	71. C	96. C	121. C	146. D	171. B	196. B
22. B	47. A	72. C	97. B	122. C	147. B	172. C	197. B
23. D	48. B	73. D	98. C	123. C	148. B	173. A	198. D
24. B	49. A	74. D	99. B	124. D	149. C	174. A	199. C
25. C	50. B	75. D	100. B	125. B	150. B	175. A	200. A

Note : *If your opinion differ regarding any answer, please message the mock test and Question number to 9560620353*

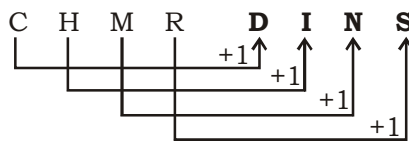
Note : *If you face any problem regarding result or marks scored, please contact : 9313111777*

SOLUTION (SSC JE Mechanical) MOCK TEST no. 73

1. (B) 'Oval' is related to 'Circle' in the same way 'Rectangle' is related to **Square**.



Similarly,



3. (A) $9536 - 6203 = 3333$,

Similarly,

$$? = 5873 - 3333 = 2540$$

4. (C) You enter and exit a highway by a ramp and you enter and exit a house by a **door**.

5. (C) A cub is a young bear, and a joey is a young **kangaroo**.

6. (B) Except Nagpur, all are north indian cities.

7. (A) $72 - 41 = 31$

$$30 - 12 = 18$$

$$51 - 42 = 9$$

$$20 - 11 = 9$$

Except in option (A), the rest of the difference are one of the factor of 9.

8. (D) $F \xrightarrow{+3} I \xrightarrow{+2} K$

$D \xrightarrow{+3} G \xrightarrow{+2} I$

$M \xrightarrow{+3} P \xrightarrow{+2} R$

$K \xrightarrow{+3} N \xrightarrow{-10} D$

9. (C) Kennel is a shelter for a pet dog, stable is a shelter for horses. Den is a living place of lion. But lock is used for safety of a door.

10. (C) $4 \times 8 + 3 = 32 + 3 = 35$

$$7 \times 6 + 7 = 42 + 7 = 49$$

$$9 \times 8 + 9 = 72 + 9 = \mathbf{81}$$

11. (A) $(7)^2 + (5)^2 + (3)^2 = 49 + 25 + 9 = 83$

$$(6)^2 + (4)^2 + (2)^2 = 36 + 16 + 4 = 56$$

$$(8)^2 + (9)^2 + (1)^2 = 64 + 81 + 1 = \mathbf{146}$$

12. (D) Only son of woman's grandfather means father of that woman.

Father of woman is the father of man's brother and hence father of that man.

Therefore, the woman is sister of the man in photograph.

13. (D) $12 \times 2 + 3 = 27$

$$27 \times 3 + 4 = 85$$

$$85 \times 4 + 5 = 345$$

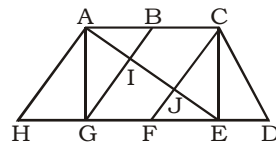
$$345 \times 5 + 6 = \mathbf{1731}$$

14. (D) Comparing (i) and (iii) dice we have,

Top	3	2	1
Bottom	4	5	6

15. (B) Some teachers may be writers or musician and vice-versa.

16. (D) The figure may be labelled as shown.



Simple triangles are AHG, AIG, AIB, JFE, CJE and CED i.e. 6 in number.

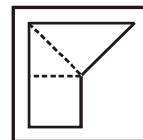
Triangles composed of two components each are ABG, CFE, ACJ and EGI i.e. 4 in number.

Triangles composed of three components each are ACE, AGE and CFD i.e. 3 in number.

There is only one triangle i.e. AHE composed of four components.

Therefore, There are $6 + 4 + 3 + 1 = 14$ triangles in the given figure.

17. (A)



18. (C) Let x and y be the ten's and unit's digits of the woman's age.

Then, woman's age = $(10x + y)$ years; husband's age = $(10y + x)$ years.

Therefore $(10y + x) - (10x + y) = (1/11)$

$$(10y + x + 10x + y)$$

$$\Rightarrow (9y - 9x) = (1/11) (11y + 11x) = (x + y)$$

$$\Rightarrow 10x = 8y \Rightarrow x/y = 4/5$$

$$\Rightarrow 10x + y = 10 \times 4 + 5 = 45$$

19. (C)

20. (D)

21. (A)

22. (B) $W \xrightarrow{+5} B \xrightarrow{+9} K \xrightarrow{+6} Q \xrightarrow{+7} X \xrightarrow{+1} Y \xrightarrow{+7} F$

$W \xrightarrow{+2} Y \xrightarrow{+3} B \xrightarrow{+4} F \xrightarrow{+5} K \xrightarrow{+6} Q \xrightarrow{+7} X$

$Y \xrightarrow{+3} B \xrightarrow{+15} Q \xrightarrow{+0} Q \xrightarrow{-11} F \xrightarrow{+2} H \xrightarrow{+6} N$

$W \xrightarrow{+3} Z \xrightarrow{+3} C \xrightarrow{+5} H \xrightarrow{+2} J \xrightarrow{+3} M \xrightarrow{+4} Q$

23. (D) $5 \times 8 = 28 \rightarrow 5 \times 8 = 40 \rightarrow 5 + 8 = 13$,

$$13 - 1 = 12 \rightarrow 40 - 12 = 28$$

$$3 \times 7 = 21 \rightarrow 3 \times 7 = 21 \rightarrow 3 + 7 = 10,$$

$$10 - 1 = 9 \rightarrow 21 - 9 = 12$$

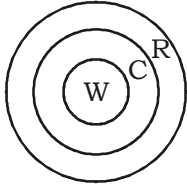
$$8 \times 6 = 35 \rightarrow 8 \times 6 = 48 \rightarrow 8 + 6 = 14,$$

$$14 - 1 = 13 \rightarrow 48 - 13 = 35$$

$$13 \times 13 = ? \rightarrow 13 \times 13 = 169 \rightarrow 13 + 13 = 26,$$

$$26 - 1 = 25 \rightarrow 169 - 25 = 144$$

24. (B) 1. 3 2. 5



25. (C)
26. (D) A **bracelet** is worn around the wrist, and a belt is worn around the waist.
27. (B) A vamp is part of a shoe, and a hood is part of a **car**.
28. (C) A **haiku** is a type of poem, and a fable is a type of story.

29. (D) $\frac{18 \times 18}{2} = \frac{324}{2} = 162$

Similarly,

$$\frac{36 \times 36}{2} = \frac{1296}{2} = 648$$

30. (C) Loss of memory is referred to as Amnesia. Similarly, loss of movement is referred to as Paralysis.
31. (D) The number 125 is a perfect cube.
 $5 \times 5 \times 5 = 125$
32. (D) The scientific study of the second is called the first in all the pairs except D.
33. (B) Except (B), In others second is a part of first whereas chair and sofa are different types.
34. (D) $5 + 2 = 7, 6 + 3 = 9, 2 + 4 = 6$
But $3 + 5 = 8 \neq 6$

35. (D) a **h** c / **c** b a / a b **c** / c b **a**

36. (B)	13	8	9	17	14	22	
	↓	↓	↓	↓	↓	↓	
	M	H	I	Q	N	V	
	1	12	7	5	2	18	1
	↓	↓	↓	↓	↓	↓	↓
	A	L	G	E	B	R	A
	4	21	7	18	13	1	
	↓	↓	↓	↓	↓	↓	
	D	U	G	R	M	A	

37. (A) C A R S I T W E L L
 ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
 Ø α δ η ψ κ σ i γ γ

M	A	P		γ	α	μ	β
↓	↓	↓	So,	↓	↓	↓	↓
μ	α	β		L	A	M	P

38. (B) $13 * 12 * 5 * 4 \rightarrow 13 = 12 + 5 - 4 = 17 - 4$

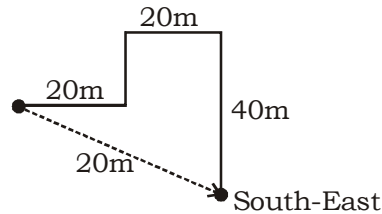
39. (B) $\frac{225}{15} = 15 \rightarrow 15 \times 2 = 30$

$$\frac{70}{7} = 10 \rightarrow 10 \times 2 = 20$$

$$\frac{?}{3} = \frac{8}{2} \rightarrow 2 \times ? = 8 \times 3$$

$$\therefore \frac{24}{2} = 12$$

40. (C)



It is clear from the diagram that I am in south-east direction with respect to the original position.

41. (C)

S	E	Q	U	E	N	C	E
↓	↓	↓	↓	↓	↓	↓	↓
H	V	J	F	V	M	X	V

Opposite Letters

Similarly,

C	H	I	L	D	R	E	N
↓	↓	↓	↓	↓	↓	↓	↓
X	S	R	O	W	I	V	M

42. (D) Suppose present age of Mrs. Lata = x years

Present age of son = y years;

$$\therefore x + y = 64 \dots(i)$$

According to the question, $x - 8 = 3(y - 8)$

$$\rightarrow x - 8 = 3y - 24 \rightarrow x - 3y = -16 \dots(ii)$$

From equations (i) and (ii), $y = 20$;

$$\therefore \text{Age of Mrs. Lata} = 64 - 20 = 44 \text{ years}$$

43. (C) $5 \times 2 + 1 = 11$

$$11 \times 2 - 1 = 21$$

$$21 \times 2 + 1 = 43$$

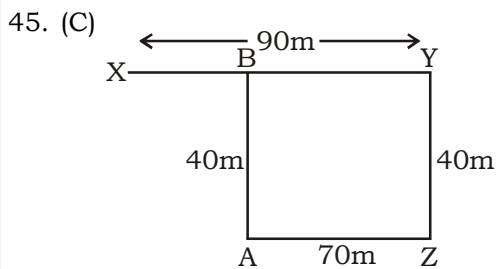
$$43 \times 2 - 1 = 85$$

$$85 \times 2 + 1 = 171$$

44. (C) $A \xrightarrow{+3} D \xrightarrow{+3} G \xrightarrow{+3} J$
 $Y \xrightarrow{-3} V \xrightarrow{-3} S \xrightarrow{-3} P$
 $K \xrightarrow{+3} N \xrightarrow{+3} Q \xrightarrow{+3} T$

Similarly,

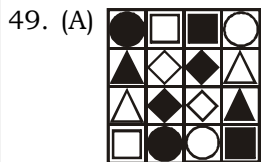
$$O \xrightarrow{-3} L \xrightarrow{-3} I \xrightarrow{-3} F$$



Required distance = $XB = 90 - 70$
 $= 20$ metre

46. (B) Clearly, assumption I is implicit in the statement. It is mentioned that the values of an educated will differ from that of an uneducated person. It does not imply that an uneducated person will not have value.

47. (A) 48. (B)



50. (B) L.C.M. of 6, 5, 7, 10 and 12 is 420.
 So, the bells will ring together after every 420 seconds i.e. 7 minutes.
 Now, $7 \times 8 = 56$ and $7 \times 9 = 63$.
 Thus, in 1 hour (or 60 minutes), the bells will toll together 8 times, excluding the one at the start.

51. (C) Gandhiji's greatest contribution to the social thought of this century is perhaps his insistence on decentralization of the means of production (economic power). According to him, large-scale industrialism is at the centralization of political power in few hands. It is in the nature of large-scale industries to centralize economic power in the hands of a few individuals. Under capitalism this power comes to be concentrated in the hands of individual capitalists and under socialism, it is arrogated by managers, technocrats and bureaucrats.

53. (B) The Control Panel is a part of the Microsoft Windows graphical user interface which allows users to view and manipulate basic system settings and

controls via applets such as adding hardware, adding and removing software, controlling user accounts and changing accessibility options.

54. (B) Chondrichthyes or cartilaginous fishes are jawed fish with paired fins, paired nares, scales, a two-chambered heart, and skeletons made of cartilage rather than bone. The cartilaginous fish are so named because their skeleton is composed of cartilage which is not reinforced by the minerals that make bone. It includes elasmobranchs: sharks, rays and skates etc.
55. (C) The Kalinga Prize for the Popularization of Science is an award given by UNESCO for exceptional skill in presenting scientific ideas to lay people. It was created in 1952, following a donation from Biju Patnaik, Founder President of the Kalinga Foundation Trust in India.
58. (A) Per capita income or average income or income per person is the mean income within an economic aggregate, such as a country or city. It is calculated by taking a measure of all sources of income in the aggregate (such as GDP or Gross National Income) and dividing it by the total population.
59. (A) The Sargasso Sea is a region in the gyre in the middle of the North Atlantic Ocean. The Sargasso Sea is home to seaweed of the genus Sargassum (origin of its name).
61. (C) To be eligible for membership in the Lok Sabha, a person must be a citizen of India and must be of 25 years of age or older, mentally sound, should not be bankrupt and should not be criminally convicted. The minimum age for a person to become a member of Rajya Sabha is 30 years.
62. (C) Visakhapatnam Urban Development Authority (VUDA), in collaboration with Indian Navy's Eastern Naval Command. It has set up India's first ship museum in the port city. The ship museum has been set up at Teneti Park abutting the Rama Krishna beach on the lines of 'INS Kurusura submarine museum' that was set up by the Indian Navy in August 2002.
63. (C) Numbers of Neutrons in ${}_{33}^{47}\text{Al} = 47 - 33 = 14$
64. (A) Sarkaria Commission was set up in June 1983. Commission's charter was to examine the relationship and balance of power between state and central governments in the country and suggest

- changes within the framework of Constitution of India. The Commission was so named as it was headed by Justice Rajinder Singh Sarkaria, a retired judge of the Supreme Court of India. The other two members of the committee were Shri B Sivaraman and Dr S R Sen.
65. (A) Eutrophication is the ecosystem response to the addition of artificial or natural substances, such as nitrates and phosphates, through fertilizers or sewage, to an aquatic system. One of its example is the "bloom".
67. (C) Iodized salt which is also spelled iodised salt, is table salt mixed with a minute amount of various salts of the element iodine. The ingestion of iodide prevents iodine deficiency. Worldwide, iodine deficiency affects about two billion people and is the leading preventable cause of mental retardation. Deficiency also causes thyroid gland problems, including "endemic goitre." In many countries iodine deficiency is a major public health problem that can be cheaply addressed by purposely adding small amounts of iodine to the sodium chloride salt.
69. (D) John McCloy was the Bank's President at that time when world bank loan was received by France.
72. (C) The peanuts or groundnut (*Arachis hypogaea*), is a species in the legume "bean" family (*Fabaceae*). The cultivated peanut was first domesticated in the valleys of Peru. It is an annual herbaceous plant growing tall.
78. (A) Gopal Hari Deshmukh was a social reformer from Maharashtra. At age of 25, Deshmukh started in the weekly *Prabhakar* under the pen name Lokhitawadi. In the first two years, he penned 108 articles on social reform. That group of articles has come to be known in Marathi literature as *Lokhitawadinchi Shatapatre*.
80. (B) He used cannon and ammunition from the Portuguese to attack the English. In June 1661, Shivaji's soldiers plundered Rajapur and captured several Englishmen. This was payback for the English aid to Bijapur. The following year, he captured a band of Englishmen in Surat for supplying ammunition to his enemies.
86. (C) OMOs are the market operations conducted by the Reserve Bank of India by way of sale/purchase of Government securities to/ from the market with an objective to adjust the rupee liquidity conditions in the market on a durable basis.
88. (A) Shortly after blackbody radiation was understood. it was noticed that the spectra of stars look extremely similar to blackbody radiation curves of various temperatures.
91. (D) Fiber glass is a fiber reinforced polymer made of a plastic matrix reinforced by fine fibers of glass. It is also known as GFK. Fiber glass is a light weight, extremely strong and robust material. Although strength properties are somewhat lower than carbon fiber and it is less stiff, also the material are much less expensive. Its bulk strength and weight properties are very favourable when compared to metals and it can be easily formed using molding processes. Common uses of fiberglass include high performance aircrafts (gliders), boats, automobiles, baths, hot tubs, water tanks, roofing, pipes, cladding, casts, surfboards and external door skins.
94. (A) The electrocardiogram (ECG or EKG) is a diagnostic tool that measures and records the electrical activity by electrodes placed on the skin. The electrocardiogram can measure the rate and rhythm of the heartbeat, as well as provide indirect evidence of blood flow to the heart muscle.
99. (B) Text can be aligned with one or both edges of a text frame. Text is said to be justified when it is aligned with both edges. We can justify text in a paragraph including the last line.
100. (B) The ABO blood group system is widely credited to have been discovered by the Austrian scientist Karl Landsteiner, who found three different blood types in 1900; he was awarded the Nobel Prize in Physiology or Medicine in 1930 for his work.
109. (B)
- If $Q_2 = 0$
- i.e. $W_{net} = Q_1$
- Or
- $\eta = 100\%$
- The heat engine will produce net work in a complete cycle be exchanging heat with only signal reservoir thus violating the kelvin-

111. (A) $C_p - C_v = R$

$$\frac{C_p}{C} = \gamma$$

$$C_v = C_p - R$$

Hence,

$$\gamma = \frac{C_p}{C_p - R} \Rightarrow \frac{1}{1 - \frac{R}{C_p}}$$

113. (A) From TdS equation

$$TdS = dh - VdP$$

for constant pressure process

$$dP = 0$$

Since $dh = C_p dT$

$$TdS = C_p dT$$

$$C_p = T \left(\frac{dS}{dT} \right)_p$$

117. (C) The primary purpose of the boot strap system is to provide an additional cooling capacity when the primary source of air does not have a sufficiently high pressure to provide the amount of cooling required.

120. (D) In operation theaters no ventilated air is supply while 100% fresh air is supplied due to requirement of sufficient Oxygen.

126. (A) When adhesion force is more than cohesion force then fluid will wet the surface and angle of contact between fluid and surface will be less than 90° (acute)

127. (C) Limitation of Piezometer

1. Piezometers cannot be used to measure pressure which are considerably excess of atmospheric pressure use of very long glass tube would be unsafe. It being both Fragile and unmanageable.
2. Gas pressure cannot be measured as gas does not form any free surface with atmosphere
3. Measurement of negative pressure is not possible due to flow of atmospheric air into the container through the tube

128. (D) Where M is metacentre and θ is small angle of hill through which a body is tilted. Hence metacenter is a point about which a body oscillate when tilted or given a small angular displacement.

129. (B) Consider a jet of liquid of radius r , length l and having internal pressure intensity P is excess of the outside pressure intensity. If the jet is cut into two halves, then the forces acting on one half will be those due to pressure intensity p on the projected area ($2rl$) and the tensile force due to surface tension σ acting along the two sides ($2l$). These two forces will be equal and opposite for equilibrium and hence we have

$$p(2rl) = \sigma(2l)$$

or $p = \frac{\sigma}{r} = \frac{2\sigma}{d}$

131. (C) $C_v = \frac{V}{V_{th}} = \sqrt{\frac{gx^2}{2y}} \times \frac{1}{\sqrt{2gh}}$

$$C_v = \sqrt{\frac{x^2}{4yH}} \Rightarrow \frac{x}{\sqrt{4yH}}$$

134. (B) Efficiency of power transmission is given by

$$\eta = \frac{H - H_L}{H}$$

For maximum efficiency

$$H_L = \frac{H}{3}$$

We get

$$\eta_{\max} = \frac{H - H/3}{H}$$

$$\eta_{\max} = 66.66\%$$

137. (A) $\Delta p = \frac{8\sigma}{d}$

$$25 = \frac{8 \times \sigma}{0.05}$$

$$\sigma = \frac{25 \times 0.05}{8} = 0.156 \text{ N/m}$$

138. (D) $P = P_0 + \frac{4\sigma}{r} = P_0 + \frac{8\sigma}{D}$

139. (D) $p = \rho gh$

$$h = \frac{p}{\rho g}$$

$$h = \frac{380}{1.2 \times 9.812}$$

$$v = \sqrt{2gh}$$

$$v = \sqrt{\frac{2 \times 9.812 \times 380}{1.5 \times 9.812}}$$

$$v = \sqrt{633.33}$$

$$v = 25.17 \text{ m/s}$$

140. (B) Filling the pump casing and the suction pipe with the liquid before it is started is known as priming. Unless the centrifugal pump is primed, it will not start as there is not centrifugal head impressed on the liquid. Positive displacement type reciprocating or rotary pump do not needed priming because the air if any cylinder or casing is driven out by the piston or vanes.

145. (B) Time of oscillation

$$T = T = 2\pi \sqrt{\frac{k^2}{hg}}$$

$$T \propto \sqrt{\frac{1}{h}}$$

149. (C) It is a diverging tube which is attached at outlet of the runner to carry water from the exit of runner to tail race.

The divergin tube helps to increase the pressure on the account of conversion of kinetic head into pressure head.

150. (B) $\tau = \left(\frac{dp}{dx}\right)\left(\frac{R}{2}\right)$

$$\tau = \left(\frac{50}{10}\right)\left(\frac{50 \times 10^{-3}}{2}\right)$$

$$= 125 \times 10^{-3} \text{ kPa}$$

$$= 0.125 \text{ kPa}$$

151. (B) Resilience is the total energy stored in a given volume of a material within elastic limit. On removal of load this energy is released. In other words, it is the area under load deflection curve within elastic limit.

156. (C) Modulus of rigidity, $G = \frac{E}{2(1+\mu)}$

$$\therefore \frac{E}{G} = 2 \times (1 + 0.25) = 2.5$$

158. (C) Principal stresses, σ_1 / σ_2

$$= \frac{\sigma_x + \sigma_y}{2} \pm \sqrt{\left(\frac{\sigma_x - \sigma_y}{2}\right)^2 + \tau_{xy}^2}$$

Since minimum principal stress is zero, so

$$= \left(\frac{\sigma_x + \sigma_y}{2}\right)^2 = \left(\frac{\sigma_x - \sigma_y}{2}\right)^2 + \tau_{xy}^2$$

$$\tau_{xy} = \sqrt{\sigma_x \sigma_y}$$

160. (d) From the equation of torsion

$$\frac{T}{J} = \frac{\tau}{R}$$

$$\frac{T}{\frac{\pi}{32} d^4} = \frac{\tau_s}{\frac{d}{2}}$$

$$\frac{16T}{\pi d^3} = \tau_s$$

$$\Rightarrow d = \sqrt[3]{\frac{16T}{\pi \tau_s}}$$

161. (a) From the equation of torsion

$$\frac{T}{J} = \frac{\tau}{R} = \frac{G\theta}{L}$$

$$\frac{W \times R}{\frac{\pi}{32} d^4} \times \frac{d}{2} = \tau$$

$$\tau = \frac{16WR}{\pi d^3}$$

163. (D) Hoop stress is tensile in nature and very hyperbolically with a maximum at inner surface and minimum at outer surface.

164. (A) Original load = $\frac{\pi^2 EI}{L^2}$

when one end of hinged column is fixed and other free. Now $L_e = 2L$

\therefore New load

$$= \frac{\pi^2 EI}{(2L)^2} = \frac{\pi^2 EI}{4L^2} = \frac{1}{4} \times \text{Original value}$$

165. (B) Usually ratio of ultimate stress to working stress is called factor of safety. In elastic theory of design the material factor of safety is only considered and the ratio of yield stress to working stress is called factor of safety.
167. (C) Inversion of single slider crank mechanism are-
1. Simple slider crank mechanism
 2. Withworth quick return mechanism
 3. Crank and slotted lever mechanism
 4. Hand pump mechanism
168. (D) Pair of teeth is at pitch point have pure rolling action. At any other position they have the sliding and rolling action.
171. (B) If the axes of the first and the last wheel of a compound gear coincide, it is called a reverted gear train.
172. (C) Friction at the sleeve makes the governor less sensitive.
174. (A) In involute profile of gear teeth pressure angle is constant throughout the engagement of teeth. this results in smooth running of the gear.
175. (A) Rim velocity $V = \sqrt{\frac{\sigma}{\rho}}$

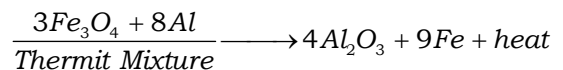
Where

σ = centrifugal stress of circumferential stress.

ρ = density of rim material

Hence, rim velocity is the function of centrifugal stress and density of rim material.

177. (A) Fatigue stress concentration factor can be defined as the ratio of endurance limit without stress concentration to the endurance limit with stress concentration.
178. (A) Cotter joint is used to connect two coaxial rods which are subjected to either tensile or compressive force. It have application to join piston rod and cross head of steam engine.
183. (D) Drill, reamer and milling cutter are the multipoint cutting tool while parting tool is a single point cutting tool.
189. (C) When material is removed in bulk coarse grain is used and this is called roughening operation while in case of finishing and super finishing operation fine grain structure is used at high speed.
193. (D) flange wrinkle is defect found in deep drawing due to this defect wrinkles are appeared in the drawn product. Flange wrinkle are appeared due to insufficient blanking holding pressure.
199. (C) Shielded metal arc welding is most extensively used manual welding process which is done with coated electrode. The coating is known as flux.
200. (A) the reaction occurs in the thermit welding is



Thermit is the mixture of iron oxide (Fe_3O_4) and aluminium.

Correction MOCK Test 72

129. (A), 142 (C), 167 (C), 171 (B)