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Answer-key & Solution

SSC JE (Civil)
MOCK -(113)
Date 03/ 9/ 2017

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

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*

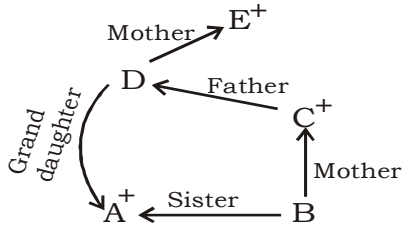
SOLUTION SSC JE (Civil) MOCK TEST no. 113

1. (C) A B Z X (2+25=27) C D **X** **W** (4+23=27); (1+26=27) (3+24=27)
2. (C) Flesh of 'Sheep' is called 'Mutton'. Similarly Flesh of 'Deer' is called 'Vension'.
3. (A) Cobbler works on leather. Similarly Tailor works on cloth.
4. (C) 1 2 3 4 5 6 2 3 4 5 6 1
S O C I A L : O C I A L S

Similarly,

1 2 3 4 5 6 2 3 4 5 6 1
D R I V E N : R I V E N D

5. (B) 11 × 11 = 121 + 11 = 132
9 × 9 = 81 + 9 = 90
6. (A) $\frac{1}{9}:\frac{1}{81}, \frac{1}{13}:\frac{\mathbf{1}}{\mathbf{169}}$ (×9, ×13)
7. (B) Malayalam is a language whereas the rest three are something in written form.
8. (A) 13 9 7 5 — M I G E — -4 -2 -2
24 20 17 15 — X T Q O — -4 -3 -2
18 14 11 9 — R N K I — -4 -3 -2
8 4 1 25 — H D A Y — -4 -3 -2
9. (A) 42 is not divisible by 4.
10. (A) Year 2012 is a leap year whereas the rest are not leap years.
11. (C) Cylinder is a 3-D figure
12. (B) Submarine runs below the water while the rest on the water.
13. (C) 4 → 2 → 3 → 5 → 1
14. (A) 3 → 1 → 2 → 4
15. (B) A C E B D F C E G **D F H** (+1, +1, +1)
16. (B) A B C P Q R D E F S T U **G H I** (+3, +3, +3)
17. (C) 2, 3, 5, 9, 17, **33** (×2-1)
18. (B) 7, 12, 22, 42, 82, **162** (×2-2)
19. (D) 5-5=0, $0^2\times4=4$; 7-3=4, $4^2\times4=64$; 11-8=3, $3^2\times4=36$; 8-2=6, $6^2\times4=$**144**
20. (A) 9 × 8 × 3 = 216
6 × **30** × 5 = 900
7 × 3 × 8 = 168
21. (B) 4, 10, **28**, 82, 244, 730 (×3-2)
22. (C) 10000, 11000, 9900, 10890, 9801, **10781**
[Current No. +(No. after excluding last digit)]
10000 + 1000 = 11000, 9900 + 990 = 10890
9801 + 980 = 10781
23. (D) 4, 8, 28, 80, 244, **728** (×3-4, ×3+4)
24. (A) 165, 195, 255, 285, 345, **375** (+30, +60)
25. (B) **a b**/a b/a **b**/**a** b/a **b**/a b
26. (D)



'+' denotes female

27. (A) **m** o p **n**/m o **p** n/**m** **o** p n/m o p **n**
28. (C) B^+ Brother N Brother M^+ Brother D
(Here '+' denotes the male)
29. (A) B M O E O Q H Q S **K S U** (+3, +2, +2)
30. (A) One letter is omitted from left end to form the next word. Then after one letter is omitted from the right end to form next word.
31. (B)

Word	Position as per English Alphabet
M	13 →(+6) 19
A	1 →(+6) 7
C	3 →(+6) 9
H	8 →(+6) 14
I	9 →(+6) 15

N 14 $\xrightarrow{+6}$ 20
E 5 $\xrightarrow{+6}$ 11

Similarly,

D 4 $\xrightarrow{+6}$ **10**
A 1 $\xrightarrow{+6}$ **7**
N 14 $\xrightarrow{+6}$ **20**
G 7 $\xrightarrow{+6}$ **13**
E 5 $\xrightarrow{+6}$ **11**
R 18 $\xrightarrow{+6}$ **24**

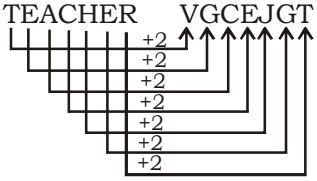
32. (B) N O I D A → 3 9 6 5 8 ; I N D I A → 6 3 5 6 8

33. (D)

Letters	Position as per alphabet (Last to beginning)
Z	1
I	18
P	11
A	26
V	5

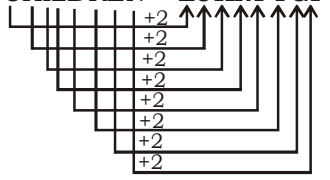
ZIP = 1×18×11 = 198 (Given)
ZAP = 1×26×11 = 286 (Given)
VIP = 5×18×11 = **990**

34. (D) TEACHER VGCEJGT



Similarly,

CHILDREN **EJKNFTGP**



35. (C) From Dice (3) and (4)

1 4 5 (in clockwise direction)
↓ ↓
1 3 6 (in clockwise direction)

So, 2 is at the bottom of the dice when the top is 1.

36. (C)

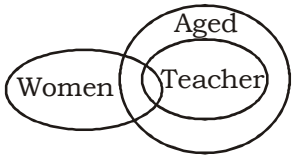
G O L D → +1 +0 +1 +1 → H O M E
C O R D → +1 +0 +1 +1 → D O S E
C O M E → +1 +0 +1 +0 → D O N E
S O N S → +1 +0 +1 +0 → T O O S

37. (B)

Word	Position as per English alphabet	
R	18 $\xrightarrow{+2}$ 20	**6720**
E	5 $\xrightarrow{+2}$ 7	
D	4 $\xrightarrow{+2}$ 6	
G	7 $\xrightarrow{+2}$ 9	**1677209**
R	18 $\xrightarrow{+2}$ 20	
E	5 $\xrightarrow{+2}$ 7	
E	5 $\xrightarrow{+2}$ 7	
N	14 $\xrightarrow{+2}$ 16	

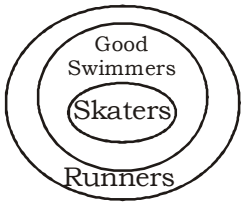
38. (D) 39. (C)

40. (B)



1. ×
2. ✓

41. (C)



1. ✓
2. ✓

42. (A) 'Aves' (Birds) & Mammals (including man) come in Animal Kingdom.

51. (C) Human Development Index (HDI) is a tool developed by the United Nations to measure and rank countries' levels of social and economic development based on four criteria : Life expectancy at birth, mean years of schooling, expected years of schooling and gross national income per capita. The HDI makes it possible to track changes in development levels over time and to compare development levels in different countries.

52. (B) The term Gilt-edged means 'of the best quality'. It is the market in government securities or the securities guaranteed by the government. The former include securities of the Government of India of the state governments; the latter are securities issued by local authorities (like corporations, municipalities and port trusts) and autonomous government undertakings like state electricity board, development etc.

53. (C) Jawaharlal Nehru proposed to make panchsheel which enshrines the first India-China agreement in 1954 as the Five Principles of peaceful co-existence.

55. (D) Womesh Chandra Banerjee was the first president of Indian National Congress (INC). It was founded in 1885. The first session of INC was held in Bombay in December 1885. Retired British ICS officer AO Hume played a key role in the formation of INC.

56. (D) Durand cup is associated with football. It was first held in 1888 and co-hosted by the Durand football Tournament Society (DFTS).

57. (A) Devaluation refers to a decrease in a currency's value with respect to other currencies. A currency is considered

devalued when it loses value relative to other currencies in the foreign exchange market.

60. (A) Direct Action Day (16th Aug 1946) also known as Calcutta Riots, was manslaughter between Hindus and Muslims in the city of Kolkata in the Bengal province of British India. The Direct Action day was announced by the Muslim league council to show the strength of Muslims feelings both to British and Congress because they felt that it will result in the communal riots.

61. (C) The Indian rupee is a blend of the Devanagari 'Ra' and Roman 'R'. The new symbol was designed by Bombay IIT post graduate D Udaya Kumar.

63. (B) Mitosis is a process by which chromosomes in a cell nucleus are separated into two identical sets of chromosomes each in its own nucleus. In general, Mitosis is a division of nucleus and so organs repair themselves through this process.

64. (A) Hot currency – Money that flows regularly between financial markets as investors attempt to ensure that they get the highest short term interest rates possible. Hot money will flow from low interest rate yielding countries into higher interest rates countries by investors looking to make the highest return.

66. (C) Community Development is the method used in the Rural area and the agency through which the five year plan seeks to initiate a process of transformation of the social and economic life of the villages. The Main lines of activity are– Agriculture, Irrigation, commu-nication, health, Education, Supplementary employment, Housing, Training, Social welfare, peoples participation (the crux of programme) etc. Because with the execution of the community development project, planning is also important. This infact is the essence of the project.

68. (C) Only charged particles can be accelerated in a magnetic field. A neutron does not have a charge, it is neutral so, cannot it be accelerated in a magnetic field.

69. (A) Vegetative propagation or a sexual propagation is the method of reproducing plants with the use of organs other than the seed and spores. Vegetative propagation allows the production of clones or plants which are considered duplicates of the parent plants genotypically and also phenotypically.

72. (B) Third five year plan (1961–1966) focussed on agriculture and improvement in the production of wheat, but two wars Sino-Indian war and India-Pak war exposed weaknesses in the economy and also there was severe drought in 1965.

81. (D) Isobars are lines on a weather map connecting points of equal atmospheric pressure.

82. (A) The colour of stars depends upon the temperature but actually it depends upon the amount of mass it has. Very massive stars, which can be over ten times the mass of the sun, are the hottest and smaller stars, with less than half the mass of the sun, are the coolest.

83. (C) Chemical name of Plaster of Paris is Calcium Sulphate Hemihydrate i.e. $CaSO_4 \cdot \frac{1}{2} H_2O$.

84. (B) Jhum cultivation is also known as shifting cultivation practised in states of North Eastern hilly region of India, Central Highland and people involved in such cultivation are called jhumia. The practice involves clearing vegetative/forest cover on land/ slopes of hills, drying and burning it before onset of monsoon and cropping on it thereafter. After harvest, this land is left fallow and vegetative regeneration is allowed on it till the plot becomes reusable for same purpose in a cycle.

88. (D) Chlorophyll is vital for photosynthesis, which allows plants to absorb energy from light and with the help of this plants prepare their own food.

89. (D) National Emergency (Article 352)- If the president of state is not satisfied with a grave emergency exists whereby the security of India or any part is threatened whether by a war or an external aggression or an armed rebellion, then he may proclaim a state of national emergency for the whole of India or a part of India. Such a proclamation of emergency may be revoked by the president subsequently. It may be subjected to the Judicial review and constitutionally can be questioned in a court of law on the grounds of malafide intention. It should be approved by both the houses of

parliament within one month after proclamation.

90. (D) A good deal of parliament business is, therefore, transacted by what are called Parliamentary committees. They are of two types-adhoc and standing committee. The Principal adhoc committees are the selected and joint committees on Bills. Others like the Railway Convention committee, the committees on the draft five year plans and the Hindi equivalents. Standing committees act as Parliaments'. 'Watch dogs' over the executive committee on subordinate Legislation, the committee on Government Assurances, the Committee on Estimates, the committee on Public Accounts and the committee on Public Undertaking and department related standing committees (DRSCS).

91. (D) To connect the Janmabhoomi and Karmabhoomi of former Prime Minister Atal Bihari Vajpayee, the Indian Railways has decided to commence the operation of Sushasan express on December 25th, 91st birthday of the former PM Atal Bihari Vajpayee from Gwalior to Gonda via Lucknow. The trains would gradually be extended to Balrampur.

93. (B) Pistil is the ovule producing part of a flower. The ovary often supports a long style, topped by a stigma. The mature ovary is a fruit and the mature ovule is a seed.

97. (B) The first Battle of Tarain was fought between Sultan Mohammad Ghori and Prithviraj Chauhan in 1191 near the town of Tarain in Haryana. The army of Mohammed Ghori was defeated by the Rajput army of Chauhan.

1. (B) Previous prime number to 97 is 89. Similarly for 43, the previous prime number is 41.

2. (D) As Tiger is found in Forest, similarly Otter is found in the water.

3. (A) $22 : 22^2 + 22 :: 27 : 27^2 + 27$
$\Downarrow \qquad \Downarrow$
$506 \qquad 756$

4. (C)

Letter	B	E		A	C
Position	2	5		1	3
	⇓			⇓	

$(2 \times 5) \times (2 + 5) = 70 \qquad (1 \times 3) \times (1 + 3) =$ **12**

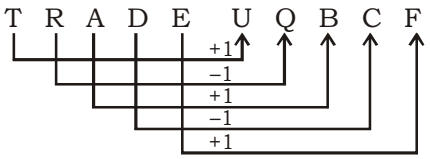
5. (B) A Monarch is a type of Butterfly and Cobra is a type of Snake.

6. (D) As chairman is the highest authority in a conference, similarly Editor is in Newspaper at highest authority.

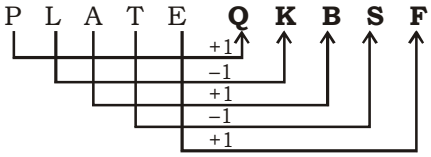
7. (A) $5 : 5^3 + 5^2 :: 11 : 11^3 + 11^2$
$\Downarrow \qquad \Downarrow$
$150 \qquad$ **1452**

8. (D) A Huckster is one who deals in Advertising and a Gangster is one who deals in Crime.

9. (A)



Similarly,



10. (B) The country of Argentina neighbours the country of Brazil. Similarly, Iraq shares the borders with Iran.

11. (D) All except locust are reptiles, while locust is an insect.

12. (D) Excepts (D), the rest options gives the same result as 19.

13. (C) In all except Trifle, 'tri' indicates 'three'.

14. (B) Except (B), In rest of the options the position of a number gets interchange.

15. (B) All except Argentina are continents, while Argentina is a country.

16. (C) Except (C), in rest of the options, second can be obtained by Multiplying 2.5 to first.

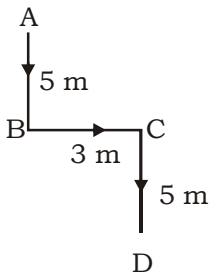
17. (B) All except Director spend money.

18. (C) Orange is the only citrus fruit in the group.

19. (B) MOUSE

20. (C) REPORT

21. (B)



Hence X will face in the end towards South.

22. (A) When the sheet shown in question figure is folded to form a box (cuboid), then the two rectangular-shaded faces lie opposite to each other, two rectangular white faces lie opposite to each other and the two square shaped faces (one shaded and one white) lie opposite to each other. Clearly,

the cuboids shown in figures (2) and (4) cannot be formed as in each of the two cuboids the two shaded rectangular faces appear adjacent to each other. So, only the cuboids in figures (1) and (3) can be formed.

23. (B) Let B and G represent the number of daughters and sons respectively.
Then, we have:
B – 1 = G and 2 (G – 1) = B.
Solving these two equations, we get :
B = 4, G = 3.

24. (B) The statement requests people not to use lift while moving down. This implies that the lift may be used to move up and the request has been made so that more people can use the lift for ascending which would otherwise cause more physical stress than going down the stairs. So, we can conclude that only II is implicit.

25. (D) The woman is the mother of Shashank's granddaughter. Hence, the woman is the daughter-in-law of Shashank.

26. (C) The correct order is :

Arrival	Introduction	Presentation
(3)	(5)	(1)
Discussion	Recommendation	
(4)	(2)	

27. (C) Father and mother are parents but they are two different entity.

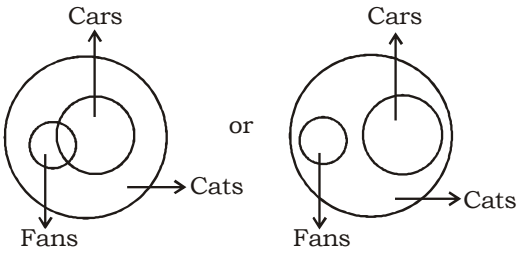
28. (B) The pattern is +4, +9, +16, +25, +36, +49 ..... i.e. $+2^2$, $+3^2$, $+4^2$, $+5^2$, $+6^2$, $+7^2$.....
So, missing term = $94 + 7^2 = 94 + 49 =$ **143**.

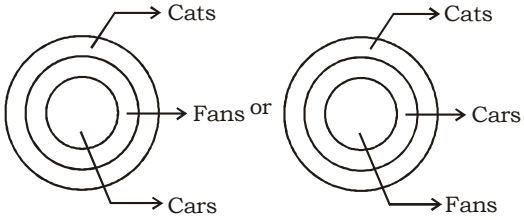
29. (B) The pattern is ÷1, ÷2, ÷3, ÷4, ÷5.
So, missing term = 360 ÷ 1 = 360.

30. (B) The pattern is × 3, + 4, × 5, + 6, × 7, ...
So, missing term = 1022 + 8 = 1030.

31. (C) In these 2 positions one common face with number 3, is in same position. Hence 1 is opposite to 6 and 4 is opposite to 2. Therefore 5 is opposite to 3.

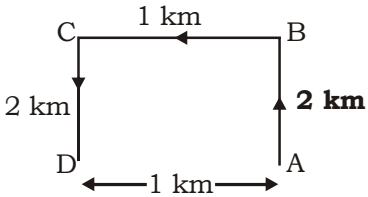
32. (D)





Hence, neither conclusion 1 nor 2 follows.

33. (B)



So, initially the boy rode 2 km Northward.

34. (B) When Rahul was born, his brother's age = 6 years
His father's age = (6 + 32) years = 38 years
His mother's age = (38 – 3) years = 35 years
His sister's age = (35 – 25) years = 10 years.

35. (C) ab**c**de/c**d**e**a**b/d**e**abc/e**a**b**c**d

36. (A) $\frac{(25+23)}{2} = 24$

and $\frac{(26+28)}{2} = 27$

Therefore $\frac{(18+14)}{2} = 16.$

37. (B) $6 + (2)^2 = 10$
$10 + (3)^2 = 19$
$19 + (4)^2 = 35.$

38. (C) $(4 + 8) \times 9 = 108 \Rightarrow 108 \times 10 = 1080$
$(5 + 4) \times 12 = 108 \Rightarrow 108 \times 10 = 1080$

39. (D)

40. (D)

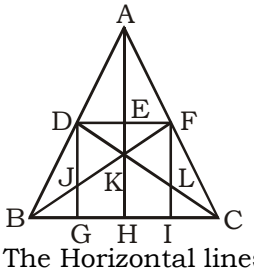
41. (B) 2, 6, 9 contain a triangle with its three medians as the outer element and another element (similar or different) placed inside it.
1, 5, 7 contain a rectangle with its two diagonals as the outer element and another element (similar or different) placed inside it.
3, 4, 8 contain a circle with its two mutually perpendicular diameters as the outer element and another element (similar or different) placed inside it.

42. (B) Every identity is moving at each of the different 5 places in a block.

43. (C)

44. (A)

45. (B)
46. (C)
47. (A) All the number in the given set are prime numbers. Here, 5 is also a prime number and it belongs to the same group.
48. (B) $2 * 3 \Rightarrow 2^3 + 3^2 = 8 + 9 = 17 \Rightarrow 17^2 = 289$
$3 * 4 \Rightarrow 3^3 + 4^2 = 27 + 16 = 43 \Rightarrow 43^2 = 1849$
$2 * 4 \Rightarrow 2^3 + 4^2 = 8 + 16 = 24 \Rightarrow 24^2 = 576$
49. (C)

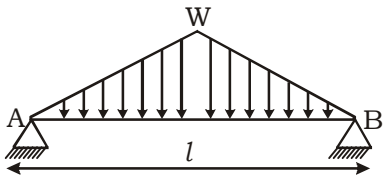


The Horizontal lines are DF and BC i.e. 2 in number. The Vertical lines are DG, AH and FI i.e. 3 in number.
The Slanting lines are AB, AC, BF and DC i.e. 4 in number.
Thus, there are **2 + 3 + 4 = 9 straight lines** in the figure.
Now, we shall count the number of triangles in the figure.
Simplest triangles are ADE, AEF, DEK, EFK, DJK, FLK, DJB, FLC, BJG and LIC i.e. 10 in number.
Triangles composed of two components each are ADF, AFK, DFK, ADK, DKB, FCK, BKH, KHC, DGB and FIC i.e. 10 in number.
Triangles composed of three components each are DFJ and DFL i.e. 2 in number.
Triangles composed of four components each are ABK, ACK, BFI, CDG, DFB, DFC and BKC i.e. 7 in number.
Triangles composed of six components each are ABH, ACH, ABF, ACD, BFC and CDB i.e. 6 in number.
There is only one triangle i.e. ABC composed of twelve components. There are **10 + 10 + 2 + 7 + 6+ 1 = 36 triangles** in the figure.

53. (A) Influenza, commonly known as the 'flu', is an infectious disease of birds and mammals caused by RNA viruses. The most common symptoms are fever, sore throat, muscle pains, headache (often severe), cough, weakness/fatigue and general discomfort. Typically, Influenza is transmitted through the air by coughs or sneezes, creating aerosols containing the virus.
63. (C) Pulses are (20 to 25%) protein by weight, which is double the protein content of wheat and three times that of rice. While pulses are generally high in protein, and the digestibilty of that protein is also high, they are often relatively poor in the essential amino acid methionine.
71. (A) The busiest rail section in respect to goods transportation is Delhi-Kolkata section.
75. (B) Kolar, Hutti, Gadag, Ramagir, Honalli, Wyand, Lawa, Mysara, Pahardia, Kundredocha have been some of the gold mines of India. Presently gold is produced from three mines viz Hutti, Uti, Hirabuddni (HGML) in Karnataka and as by product from base-metal sulphide deposite of Khetri (Rajasthan), Mosabani, Singhbum (Jharkhand).
80. (D) The processing of agricultural products, the production of grain by threshing, the production of flour by milling, the curing of sking and the production of leather, the production and preservation of meat and fish products, the preservation of fruit by drying, bottling, etc., the production of dairy products such as butter or cheese, the production of beer, wine or spirits, the production of baskets and mats, etc, come under processing of primary commodities for own consumption.
83. (D) Molars are the posterior most and most complicated kind of tooth in most of the mammals. Adult humans have twelve molars. They are in four groups in which three are at the back of the mouth. The third, rearmost molar in each group is called a wisdom tooth.
85. (A) In economics, the study of factor pricing is related to the theory of functional distribution which attempts to explain the prices of land, labour, and capital. It take care of the demand for land, labour and capital as derived demand, stemming from the demand for final goods.
88. (C) Copper : 9% less conductive than silver, aluminium is 10% less conductive than than copper, while steel is the least conductive among the given options. So, the most electrically conductive metal is silver.
92. (B) Reflected waves are simply those waves that are neither transmitted nor absorbed, but are reflected from the surface of the medium they encounter. The amount of incident-wave energy that is reflected from a surface depends on the nature of the surface and the angle at which the wave strikes the surface. The amount of wave energy reflected increases as the angle of incidence. The reflection of energy is the reflecting surface.
99. (A) In order to give more strength and more elasticity, natural rubber is heated with sulphur or sulphur compounds at 150°C temperature. Vulcanized rubber has good

tensile strength. The working temperature of vulcanized rubber is enhanced up to 100°C. It has good resistance to organic solvents.

114. (A)



Total load on the beam

$$= \frac{1}{2} \times l \times w = \frac{wl}{2}$$

Due to symmetrical

$$R_a = R_b = \frac{wl}{4}$$

Maximum B.M will be at the distance of $l/2$

$$\text{Maximum B.M.} = \frac{wl}{4} \times \frac{l}{2} - \frac{w}{3l} \times \frac{l^3}{8} = \frac{wl^2}{12}$$

115. (D) $\text{Slope} = \dfrac{w\left(\frac{l}{2}\right)^2}{2EI} = \dfrac{wl^2}{8EI}$

117. (B) $\tau = 5N/mm^2$ D = 40 mm

$$\frac{T}{J} = \frac{\tau}{r} = \frac{C\theta}{L}$$

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

$$= \frac{\frac{\pi}{32}(40)^4 \times 5}{20} = 62831.85\ Nmm$$

= 62.83 Nm

149. (B) More plastic index results more plasticity

Soil A PI = 40 -20 = 20

Soil B PI = 60-25 = 35

Means soil B is more plastic

184. (A) $\dfrac{\text{span}}{\text{Effective depth}}$ for

(i) cantilever = 7

(ii) simply supported = 20

(iii) continous = 26

193. (A) $\textit{True length} = \dfrac{30.1 \times 6000}{30} = 6020m$

194. (C) Magnetic Bearing = N 88^0 E = 88^0

True Bearing = S 89^0 E = 180^0-89^0 = 91^0

True Bearing = magnetic Bearing $\pm$ declination

Declination = 91^0-88^0 = 3^0E

(East because value is positive)

198. (D)

B.S.	I.S.	F.S.	Rise	Fall
0.50				
	1.00			0.5
	1.50			0.5
1.20		2.00		0.5
	1.70			0.5
	2.20			0.5
		2.70		0.5

Σ fall = 3.0