

★ ****SSC JE 2024 – Electrical Engineering (Paper 1)**

PYQ-Based Full MCQs Question Paper**

Total Questions: 100 | Pattern: SSC JE Paper 1

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SECTION–A: GENERAL INTELLIGENCE & REASONING (25 MCQs)

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1. 14, 28, 56, 112, ?

- A) 168
- B) 200
- C) 224
- D) 256

✓ **Correct Option: C**

2. If PEN = 35, PAPER = 50, then NOTE = ?

- A) 48
- B) 52
- C) 55
- D) 60

✓ **Correct Option: B**

****3. Which number is odd?**

17, 19, 23, 27, 29**

- A) 19
- B) 23
- C) 27
- D) 29

✓ **Correct Option: C**

4. Eagle : Sky :: Fish : ?

- A) Water
- B) Stone
- C) Fire
- D) Ground

✓ **Correct Option: A**

5. Mirror image of 2514 shows 5 as—

- A) Same
- B) Reversed
- C) Upside
- D) Distorted

✓ **Correct Option: B**

6. SERIES: 5, 11, 23, 47, ?

- A) 93
- B) 95
- C) 97
- D) 99

✓ **Correct Option: C**

7. If A=1, Z=26, sum of letters in "WIRE"=?

- A) 50
- B) 52
- C) 54
- D) 56

✓ **Correct Option: A**

8. Choose odd:

- A) Cube
- B) Cylinder
- C) Cone
- D) Square

✓ **Correct Option: D**

9. Word NOT made from "ELECTRICITY":

- A) city
- B) try
- C) tree
- D) tile

✓ **Correct Option: C**

****10. If $\times = +$, $+= -$, $- = \div$, then**

$18 \times 6 + 3 - 3 = ?$ **

- A) 15
- B) 18
- C) 20
- D) 21

✓ Correct Option: A

11. 6, 12, 24, 48, ?

- A) 72
- B) 96
- C) 100
- D) 120

✓ Correct Option: B

****12. Blood relation:**

A is mother of B. C is husband of A. D is sister of C.

D is ____ of B.**

- A) Aunt
- B) Cousin
- C) Sister
- D) Grandmother

✓ Correct Option: A

****13. Choose analogy:**

Battery : Energy :: Bulb : ?**

- A) Wire
- B) Light
- C) Heat
- D) Switch

✓ Correct Option: B

****14. Find missing:**

2, 5, 10, 17, 26, ?**

- A) 35
- B) 37
- C) 38
- D) 40

✓ Correct Option: B

****15. Odd one out:**

Red, Blue, Green, White**

- A) Red
- B) Blue
- C) Green
- D) White

✓ **Correct Option: D**

16. 25% of 480 + 50% of 120 = ?

- A) 120
- B) 180
- C) 200
- D) 240

✓ **Correct Option: B**

17. If SUN = 54, MOON = 68, then STAR = ?

- A) 58
- B) 62
- C) 64
- D) 68

✓ **Correct Option: C**

****18. Arrange words in dictionary order:**

Electric, Electron, Electrolyte, Electrode**

- A) Electric, Electron, Electrode, Electrolyte
- B) Electric, Electrode, Electron, Electrolyte
- C) Electric, Electrolyte, Electrode, Electron
- D) Electron, Electric, Electrode, Electrolyte

✓ **Correct Option: A**

****19. Series:**

3, 9, 18, 30, 45, ?**

- A) 61
- B) 63
- C) 68
- D) 72

✓ **Correct Option: B**

****20. Odd one out:**

Solar, Wind, Diesel, Hydro**

- A) Solar
- B) Wind
- C) Diesel
- D) Hydro

✓ **Correct Option: C**

****21. Fill missing alphabet:**

A, C, F, J, ?**

- A) N
- B) M
- C) L
- D) K

✓ **Correct Option: A**

22. If 9 = 36, 7 = 20, 11 = 60, then 13 = ?

- A) 72
- B) 76
- C) 78
- D) 84

✓ **Correct Option: B**

23. Identify correct pair:

- A) Table – Wood
- B) Glass – Steel
- C) Rubber – Iron
- D) Brick – Cotton

✓ **Correct Option: A**

24. Figure-based series question answer

✓ **Correct Option: 3**

25. Odd:

- A) North
- B) South
- C) Right

D) East

✓ Correct Option: C

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SECTION-B: GENERAL AWARENESS (25 MCQs)

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26. Father of Electricity—

A) Newton

B) Faraday

C) Maxwell

D) Coulomb

✓ Correct Option: B

27. Largest continent—

A) Africa

B) Asia

C) Europe

D) Antarctica

✓ Correct Option: B

28. Constitution of India adopted on—

A) 15 Aug 1947

B) 26 Nov 1949

C) 26 Jan 1950

D) 1 Jan 1951

✓ Correct Option: B

29. Highest civilian award of India—

A) Padma Shri

B) Padma Bhushan

C) Padma Vibhushan

D) Bharat Ratna

✓ Correct Option: D

30. Main component of LPG—

A) Methane

B) Butane

- C) Oxygen
- D) Hydrogen

✓ **Correct Option: B**

31. World's fastest land animal—

- A) Leopard
- B) Tiger
- C) Cheetah
- D) Lion

✓ **Correct Option: C**

32. First woman PM of India—

- A) Pratibha Patil
- B) Sonia Gandhi
- C) Indira Gandhi
- D) Sarojini Naidu

✓ **Correct Option: C**

33. Unit of power—

- A) Joule
- B) Watt
- C) Pascal
- D) Henry

✓ **Correct Option: B**

34. ISRO's first satellite—

- A) Rohini
- B) Aryabhata
- C) Chandrayaan
- D) INSAT

✓ **Correct Option: B**

35. Capital of Australia—

- A) Sydney
- B) Brisbane
- C) Canberra
- D) Melbourne

✓ **Correct Option: C**

36. Chemical symbol of Copper—

- A) Co
- B) Cu
- C) Ca
- D) Cr

✓ Correct Option: B

37. pH of pure water—

- A) 5
- B) 6
- C) 7
- D) 8

✓ Correct Option: C

38. World's largest ocean—

- A) Atlantic
- B) Indian
- C) Arctic
- D) Pacific

✓ Correct Option: D

39. Author of Ramayana—

- A) Valmiki
- B) Tulsidas
- C) Ved Vyas
- D) Chanakya

✓ Correct Option: A

40. Gas used in balloons—

- A) Oxygen
- B) Helium
- C) CO₂
- D) Nitrogen

✓ Correct Option: B

41. National animal of India—

- A) Tiger
- B) Elephant
- C) Lion
- D) Leopard

✓ **Correct Option: A**

42. Blood cells that fight infections—

- A) RBC
- B) WBC
- C) Platelets
- D) Plasma

✓ **Correct Option: B**

43. World Environment Day—

- A) 5 June
- B) 10 April
- C) 10 June
- D) 15 July

✓ **Correct Option: A**

44. Largest dome in India—

- A) Sanchi
- B) Gol Gumbaz
- C) Taj Mahal
- D) Ellora

✓ **Correct Option: B**

45. Author of "Discovery of India"—

- A) Gandhi
- B) Nehru
- C) Ambedkar
- D) Tagore

✓ **Correct Option: B**

46. Currency of Japan—

- A) Yuan
- B) Won
- C) Yen

D) Dollar

✓ Correct Option: C

47. First Indian to win Nobel Prize—

A) Raman

B) Tagore

C) Amartya Sen

D) Mother Teresa

✓ Correct Option: B

48. Gas responsible for greenhouse effect—

A) Oxygen

B) CO₂

C) Nitrogen

D) Argon

✓ Correct Option: B

49. Headquarters of UNESCO—

A) London

B) Paris

C) New York

D) Geneva

✓ Correct Option: B

50. Full form of GDP—

A) Gross Domestic Product

B) General Development Plan

C) Gross District Production

D) General Domestic Production

✓ Correct Option: A

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SECTION-C: ELECTRICAL ENGINEERING (50 MCQs)

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51. Transformer works on the principle of—

- A) Electrostatic induction
- B) Electromagnetic induction
- C) Thermal effect
- D) Chemical effect

✓ Correct Option: B

52. Which law states $V \propto I$?

- A) Faraday's law
- B) Ohm's law
- C) Lenz's law
- D) Gauss law

✓ Correct Option: B

53. Resistivity unit—

- A) Ω
- B) Ωm
- C) Ω/m
- D) $\text{m}\Omega$

✓ Correct Option: B

54. Power factor =

- A) $\tan \phi$
- B) $\sin \phi$
- C) $\cos \phi$
- D) $\sec \phi$

✓ Correct Option: C

55. Frequency in India—

- A) 40 Hz
- B) 50 Hz
- C) 60 Hz
- D) 75 Hz

✓ Correct Option: B

56. DC supply not used in transformer because—

- A) No flux variation
- B) Excess current
- C) Overheating

D) All of these

✓ **Correct Option: D**

57. In series circuit, current is—

A) Maximum

B) Zero

C) Same everywhere

D) Different at each point

✓ **Correct Option: C**

58. Capacitor stores—

A) Current

B) Charge

C) Power

D) Flux

✓ **Correct Option: B**

59. Kirchhoff's Current Law is based on conservation of—

A) Energy

B) Charge

C) Power

D) Momentum

✓ **Correct Option: B**

60. Synchronous speed =

A) $120P/f$

B) $120f/P$

C) $P/120f$

D) $f/120P$

✓ **Correct Option: B**

61. Induction motor is basically—

A) Synchronous motor

B) Transformer

C) DC motor

D) Stepper motor

✓ **Correct Option: B**

62. Slip in induction motor is—

- A) Always zero
- B) < 1
- C) Negative
- D) > 1

✓ **Correct Option: B**

63. Back EMF is produced in—

- A) Transformer
- B) Battery
- C) DC motor
- D) Relay

✓ **Correct Option: C**

64. Fuse used for—

- A) Reverse current
- B) Voltage change
- C) Overload protection
- D) Increasing power

✓ **Correct Option: C**

65. Inductive reactance X_L =

- A) $2\pi fL$
- B) $1/2\pi fC$
- C) $f/2\pi L$
- D) L/R

✓ **Correct Option: A**

66. Capacitive reactance X_C =

- A) $2\pi fC$
- B) $1/2\pi fC$
- C) fC
- D) $f/2\pi C$

✓ **Correct Option: B**

67. Which motor is used in fans?

- A) DC motor
- B) Universal motor

- C) Induction motor
 - D) Servo motor
 - ✓ **Correct Option: C**
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68. Transformer core is laminated to reduce—

- A) Hysteresis loss
 - B) Copper loss
 - C) Eddy current loss
 - D) Mechanical loss
 - ✓ **Correct Option: C**
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69. Earth wire color—

- A) Blue
 - B) Black
 - C) Green
 - D) Red
 - ✓ **Correct Option: C**
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70. Unit of magnetic flux—

- A) Weber
 - B) Tesla
 - C) Henry
 - D) Farad
 - ✓ **Correct Option: A**
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71. In 3-phase balanced system, phase difference is—

- A) 30°
 - B) 60°
 - C) 120°
 - D) 180°
 - ✓ **Correct Option: C**
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72. Meter used to measure energy—

- A) Ammeter
- B) Voltmeter
- C) Wattmeter
- D) Energy meter
- ✓ **Correct Option: D**

73. Copper loss in transformer varies with—

- A) Voltage
- B) Frequency
- C) Load
- D) Temperature

✓ Correct Option: C

74. Iron loss occurs due to—

- A) Hysteresis & eddy currents
- B) Load
- C) Temperature
- D) Current only

✓ Correct Option: A

75. Which material is semiconductor?

- A) Copper
- B) Glass
- C) Silicon
- D) Iron

✓ Correct Option: C

76. SCR is a—

- A) Diode
- B) Transistor
- C) Controlled rectifier
- D) MOSFET

✓ Correct Option: C

77. Efficiency of transformer is maximum when—

- A) Copper loss = Iron loss
- B) Load is zero
- C) No load
- D) Core is saturated

✓ Correct Option: A

78. DC motor used for traction—

- A) Shunt
- B) Series
- C) Compound
- D) Universal

✓ Correct Option: B

79. Star connection line voltage =

- A) Phase voltage
- B) $\sqrt{3} \times$ phase voltage
- C) Phase voltage / $\sqrt{3}$
- D) Zero

✓ Correct Option: B

80. Star connection line current =

- A) Phase current
- B) $\sqrt{3} \times$ phase current
- C) Zero
- D) Half of phase current

✓ Correct Option: A

81. Which motor gives constant speed?

- A) DC shunt
- B) DC series
- C) DC compound
- D) Stepper

✓ Correct Option: A

82. Power factor of resistive circuit—

- A) 0
- B) 1
- C) Lagging
- D) Leading

✓ Correct Option: B

83. Battery converts—

- A) Chemical → Electrical
- B) Electrical → Chemical
- C) Mechanical → Electrical

D) Heat → Electrical

✓ **Correct Option: A**

84. Insulation resistance measured using—

A) Ammeter

B) Megger

C) Voltmeter

D) Wattmeter

✓ **Correct Option: B**

85. Temperature coefficient of resistance for metals—

A) Zero

B) Negative

C) Positive

D) Infinity

✓ **Correct Option: C**

86. Which material has highest conductivity?

A) Silver

B) Copper

C) Aluminium

D) Iron

✓ **Correct Option: A**

87. Permanent magnet used in—

A) DC motor

B) Synchronous motor

C) Stepper motor

D) All of these

✓ **Correct Option: D**

88. Full form of LED—

A) Light Emission Device

B) Light Emitting Diode

C) Low Energy Diode

D) Laser Emitting Device

✓ **Correct Option: B**

89. Choke coil used in—

- A) Heater
- B) Fan
- C) Tube light
- D) AC

✓ **Correct Option: C**

90. Which is NOT a type of DC generator?

- A) Series
- B) Shunt
- C) Compound
- D) Synchronous

✓ **Correct Option: D**

91. Fuse rating depends on—

- A) Voltage
- B) Current
- C) Power
- D) Frequency

✓ **Correct Option: B**

92. Meter to measure frequency—

- A) Multimeter
- B) Frequency meter
- C) Energy meter
- D) Wattmeter

✓ **Correct Option: B**

93. Lenz's law gives direction of—

- A) EMF
- B) Current
- C) Flux
- D) Resistance

✓ **Correct Option: B**

94. In RL circuit, current—

- A) Leads voltage
- B) Lags voltage

C) Same as voltage

D) Opposite

✓ **Correct Option: B**

95. DC generator output is—

A) AC

B) DC

C) AC & DC

D) Pulsating AC

✓ **Correct Option: B**

96. In AC circuit, true power =

A) VI

B) $VI \cos \phi$

C) $VI \sin \phi$

D) $VI \tan \phi$

✓ **Correct Option: B**

97. Rotor of induction motor rotates—

A) At synchronous speed

B) Faster than synchronous speed

C) Slower than synchronous speed

D) Zero speed

✓ **Correct Option: C**

98. Which increases motor speed?

A) Increase load

B) Increase resistance

C) Increase voltage

D) Short circuit

✓ **Correct Option: C**

99. DC shunt motor has—

A) High starting torque

B) Medium torque

C) Low torque

D) Very high torque

✓ **Correct Option: C**

100. Circuit breaker works on—

- A) Heating
- B) Electromagnetic
- C) Chemical
- D) Sound

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