



SHRI VISHWAKARMA SKILL UNIVERSITY

(A State Skill University, setup by an Act of Legislature in 2016)

RECRUITMENT EXAMINATION

Advertisement No. HVSU/18/ENT /007 dt. 07/11/2018

SKILL INSTRUCTOR (ELECTRICAL)



**Max. Marks : 90 Marks
Time : 90 Minutes**

Skill Instructor (Electrical)

1. The voltage supplied by one cell of a lead acid battery is
 - (a) approximately 0.5 V
 - (b) approximately 1.11 V
 - (c) approximately 1.6 V
 - (d) approximately 2 V
2. Which is most superior, dielectric medium?
 - (a) Paper
 - (b) Glass
 - (c) Bakelite
 - (d) Air
3. Four condensers of $4\ \mu\text{F}$ each are connected in parallel. Their equivalent capacitance will be
 - (a) $1\ \mu\text{F}$
 - (b) $4\ \mu\text{F}$
 - (c) $16\ \mu\text{F}$
 - (d) $64\ \mu\text{F}$
4. The law that induces e.m.f. and current always oppose the cause which produces it, is discovered by
 - (a) Faraday
 - (b) Lenz
 - (c) Maxwell
 - (d) Leonard
5. The capacity of battery is expressed in
 - (a) Ampere-hour
 - (b) Ampere-volt
 - (c) Kilo-watt
 - (d) Volts
6. Cells are connected in series in order to
 - (a) increase the current rating
 - (b) increase the voltage rating
 - (c) increase the life of the cells
 - (d) None of these

7. Horse power is the unit of
- (a) electrical energy
 - (b) work
 - (c) power
 - (d) force
8. Power taken by a resistance of 20ohms with a flow of 10A current is
- (a) 1 kW
 - (b) 1.5 kW
 - (c) 2.5 kW
 - (d) 2 kW
9. The cost of energy consumed by 5 lamps of 200W each for 5 hours at the rate of 30 paise/kWh will be
- (a) Rs. 3.50
 - (b) Rs. 3.00
 - (c) Rs. 2.50
 - (d) Rs. 1.50
10. A 100W, 100V lamp is to be operated on 250 V supply, the value of additional resistance to be connected in series will be
- (a) 250 ohms
 - (b) 100 ohms
 - (c) 150 ohms
 - (d) 50 ohms
11. Does the electric current always produce a magnetic field?
- (a) No, only large currents produce a magnetic field.
 - (b) No, a magnetic field is produced only in the presence of an iron core.
 - (c) No, a magnetic field is produced only in the presence of a coil.
 - (d) Yes, the electric current always produce a magnetic field.
12. A magnet is able to attract
- (a) iron, aluminium and brass.
 - (b) iron, cobalt and zinc.
 - (c) iron, copper and nickel.
 - (d) nickel, cobalt and steel.
13. Two parallel conductors are carrying current in the same direction. Which of the following statement is correct ?

- (a) There is a repelling force.
 - (b) The force increases when the current is decreased.
 - (c) There is an attracting force between the conductors.
 - (d) The force increases when the distance between the conductors is increased.
14. In an RLC series circuit $R=5\Omega$, $X_L=10\Omega$, $X_C=15\Omega$. If this circuit is fed from a voltage $e=100 \sin(314t)$, the r.m.s current will be
- (a) 3.33 A
 - (b) 14.14 A
 - (c) 10 A
 - (d) 2.1 A
15. A resistance and an inductance are connected in parallel across an AC source. The currents through the two parallel branches will be out of phase by
- (a) 90°
 - (b) 0°
 - (c) 180°
 - (d) None of these.
16. The third wire of a 3-pin plug is
- (a) to provide a spare wire in case of need.
 - (b) to provide a 3-phase supply, when required.
 - (c) to prevent the plug being reversed in the socket.
 - (d) to provide an earth wire.
17. If an terminal voltage V , the current I and the phase angle Φ are known, how is the apparent power of a single phase transformer calculated?
- (a) $P_a = V \times I$
 - (b) $P_a = V \times I \times \sin\Phi$
 - (c) $P_a = (V \times I) / \sin\Phi$
 - (d) $P_a = V \times I \times \cos\Phi$
18. To get 230 V from a three phase 20000/400V supply transformer, the three windings of its secondary side should be connected in
- (a) delta.
 - (b) parallel.
 - (c) star.
 - (d) series.
19. In resonant circuits, the power factor at resonance is

- (a) zero.
 - (b) 1.
 - (c) 0.5.
 - (d) 0.707.
20. The rotating part of a DC motor is known as
- (a) pole.
 - (b) stator.
 - (c) armature.
 - (d) carbon brush.
21. Carbon brushes are used in electric motors to
- (a) brush off carbon deposits on the commutator.
 - (b) provide a path for flow of current.
 - (c) prevent overheating of armature windings.
 - (d) prevent sparking during commutation.
22. The speed of a DC motor is
- (a) is directly proportional to back emf and inversely proportional to flux.
 - (b) is inversely proportional to back emf and directly proportional to flux.
 - (c) is directly proportional to back emf as well as flux.
 - (d) is inversely proportional to back emf as well as flux.
23. The e.m.f induced in the armature of DC machine is
- (a) directly proportional to the flux and inversely proportional to the speed.
 - (b) directly proportional to both the flux and speed.
 - (c) inversely proportional to both the flux and speed.
 - (d) None of above.
24. Plugging of DC motors is normally executed by
- (a) reversing the field polarity.
 - (b) reversing the armature polarity.
 - (c) reversing both armature and field polarity.
 - (d) connecting a resistance across the armature.
25. The direction of rotation of a DC shunt motor can be reversed by interchanging
- (a) the supply terminals.
 - (b) the field terminals only.
 - (c) the armature terminals only.
 - (d) either field or the armature terminals.

26. A commutator is made of
- (a) iron laminations.
 - (b) copper segments.
 - (c) both iron laminations and copper segments.
 - (d) None of these.
27. The torque of a shunt motor is proportional to
- (a) armature current.
 - (b) applied voltage.
 - (c) square of the armature current.
 - (d) None of these.
28. If D.C supply is given to a transformer it may
- (a) work.
 - (b) not work.
 - (c) give lower voltage than the rated voltage on secondary side.
 - (d) burn the winding.
29. Which of the following is a correct statement about eddy current?
- (a) Eddy currents improve the efficiency of a motor.
 - (b) Eddy currents do not influence the movement.
 - (c) Eddy current heat up the metal parts.
 - (d) Eddy currents are used for arc welding.
30. If in a transformer the secondary turns are doubled and at the same time the primary voltage is reduced by half, then the secondary voltage will
- (a) be halved.
 - (b) be four times as high.
 - (c) not change.
 - (d) be reduced to a quarter.
31. The induced e.m.f. in the secondary of a transformer will depend on
- (a) frequency of the supply only.
 - (b) number of turns in the secondary only.
 - (c) maximum flux in the core only.
 - (d) frequency, flux and number of turns in the secondary.
32. The full load copper-loss and iron loss of a transformer are 6400 watts and 5000 watts, respectively. The above copper loss and iron loss at half load will be
- (a) 3200 W, 2500 W respectively.

- (b) 3200 W, 5000 W respectively.
 - (c) 1600 W, 1250 W respectively.
 - (d) 1600 W, 5000 W respectively.
33. The main purpose of performing open-circuit test at rated voltage is to measure
- (a) copper loss.
 - (b) core loss.
 - (c) total loss.
 - (d) insulation resistance.
34. Transformer oil is used as
- (a) insulant only.
 - (b) coolant only.
 - (c) both insulant and coolant.
 - (d) inert medium.
35. When the secondary of the transformer is loaded, the flux in the transformer will
- (a) remain constant.
 - (b) directly proportional to the excessive current drawn by primary winding.
 - (c) directly proportional to secondary current.
 - (d) None of these.
36. A current transformer is used to measure a 100A current by 5A ammeter. The current transformer is a
- (a) step up transformer.
 - (b) step down transformer.
 - (c) power transformer.
 - (d) distribution transformer.
37. An alternator running at 3000 rpm generates voltage at 50Hz. The number of poles of alternator will be
- (a) 8 poles.
 - (b) 6 poles.
 - (c) 4 poles.
 - (d) 2 poles.
38. Rotor winding of the synchronous motor is excited by
- (a) induction from stator current.
 - (b) A.C supply.
 - (c) D.C supply by the exciter.

- (d) the revolving field.
39. In a 3-phase induction motor, the current is produced in the rotor conductors by
- (a) giving A.C supply.
 - (b) giving D.C supply.
 - (c) induction effect.
 - (d) pulsating D.C supply.
40. If one of the three phases of a 3-phase induction motor is disconnected while running at light load, it will
- (a) stop running.
 - (b) continue to run at same speed.
 - (c) run at low speed.
 - (d) run at high speed.
41. What is the advantage of the slipring induction motor over the squirrel cage induction motor?
- (a) It is suitable for higher speeds.
 - (b) Its efficiency is higher.
 - (c) Its power factor is higher.
 - (d) It can be started with help of rotor resistances.
42. Which of the following statements about induction motor is true?
- (a) The motor can run only in one direction.
 - (b) The laminations of the rotor should be properly insulated against one another.
 - (c) The cage rotor is made of copper.
 - (d) The stator winding produces a rotating magnetic field.
43. Which of the following lubricants is used on shaft of motor for lubrication?
- (a) Graphite.
 - (b) Grease.
 - (c) Silicon oil.
 - (d) Mineral oil.
44. In an induction motor, the motor fails to start when number of rotor slots is equal to number of stator slots. This is known as
- (a) crawling.
 - (b) cogging.
 - (c) synchronous cusps.
 - (d) None of these.

45. Which of the following motors has highest starting torque?
- (a) Split-phase motor.
 - (b) Shaded pole motor.
 - (c) Capacitor start motor.
 - (d) Repulsion motor.
46. The meter used for measuring potential difference of a circuit is called
- (a) voltmeter.
 - (b) ammeter.
 - (c) energy meter.
 - (d) ohm meter.
47. Most commonly used wattmeter is
- (a) induction type.
 - (b) electrostatic type.
 - (c) dynamometer type.
 - (d) moving iron type.
48. Megger is used for measuring
- (a) low resistance.
 - (b) high resistance.
 - (c) medium resistance.
 - (d) very low resistance.
49. A CRO can display
- (a) A.C signals.
 - (b) D.C signals.
 - (c) both A.C and D.C signals.
 - (d) time invariant signal.
50. In two wattmeter method of measuring 3-phase power, power factor is 0.5, then one of the wattmeter will read
- (a) $W/2$.
 - (b) zero.
 - (c) $\sqrt{2} \times W$.
 - (d) $W/\sqrt{3}$.

•
General English

- Q51. Choose the one which best expresses the meaning of the given word:
LOQUACIOUS
(A) Talkative (B) Slow
(C) Content (D) Unclear
- Q52. Find out which part of the sentence has an error:
Believe me, I (a) / am believing (b) / whatever you have said. (c) / No error (d)
(A) (a) (B) (b)
(C) (c) (D) (d)
- Q53. Pick the right meanings of the following **idiom and phrase**:
Blaze the trail
(A) To stop a movement
(B) To join a movement
(C) To protect a movement
(D) To start a movement
- Q54. Choose the one which is most opposite in meaning to the given word:
Impecunious
(A) Wealthy
(B) Cautious
(C) Hungry
(D) Tardy
- Q55. Fill in the blank with suitable article:
I have bought _____ box of chocolates that you asked for.
(A) an (B) a (C) the (D) no article
- Q56. Fill in the blank:
Cultivation, management, and study of individual trees is called as _____.
(A) Arboriculture
(B) Sericulture
(C) Horticulture
(D) Viticulture
- Q57. **Directions:** In question given below, the first and the last sentences are numbered 1 and 6. Remaining sentences are named P, Q, R and S. These four sentences are not given in their proper order. Read the sentences and find out which of the four combinations is correct:
1: Diagnosis is an important component of health care.
P: Then came the stethoscope, the micro- scope, laboratory tests with chemicals, screenings and X-rays.

Q: The first barometer to be used in determining a health condition was the pulse and along with it, the tongue, throat and eyes.

R: Diagnostic facilities are the single most important qualitative element missing in our rural health services.

S: Now diagnostic technology includes ultrasonic gadgets and nuclear equipments which have found their way into some of our urban hospitals.

6: Doctors at rural health centers are left to rely on their own clinical skill and the stethoscope to determine the nature and extent of an illness.

(A) QSPR (B) RPSQ (C) QPSR (D) RSPQ

Q58. Choose the correct option to complete the sentence given below:

Chetan _____ his father in the shop until school _____.

- (A) is helping, starts
- (B) helped, was starting
- (C) was helping, will start
- (D) has helped, is starting

Q59. Pick out the most effective word from the given options to fill in the blank to make the sentence meaningfully complete:

What is the _____ for an air letter?

- (A) Fare (B) value (C) Postage (D) Stamp

Q60. **Directions:** Read the following passage to answer the given question based on it.

Until the end of his first year at school, Cyril retained many of the pleasures and pursuits he had brought with him from home, and he kept an old interest in butterflies and fossils. His grandmother had presented him with a fine bird's eggs cabinet, but he could never bring himself to risk in climbing trees. Once or twice he dissected dead birds from sheer determination to overcome his horror of the operation. Probably it was his envy of those physically unlike himself that brought on a phase during which he drew massive athletes with thick necks and square shoulders. Again he was pitying himself for what he could never be.

Cyril's early schooling was in some ways like home life because

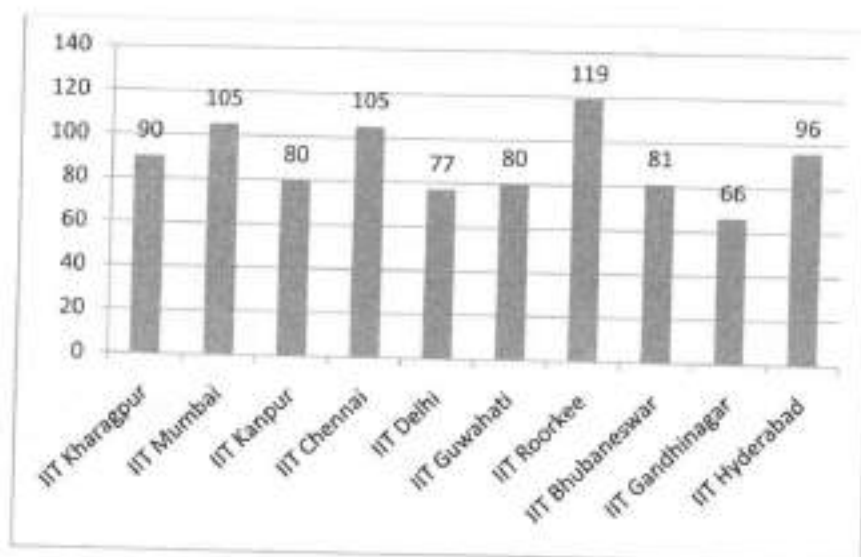
- (A) he had all his old friends with him
- (B) the food and the climate were same as at home
- (C) he kept on doing what gave joy and recreation at home
- (D) his family visited him often

General Aptitude

- Q61. Deepti started from point A in south direction. After walking for 4 m she turned to her right and walked 5 m. Now she turned to her left and walked 3 m after which she turned to her right. Now she walked 4 m and turned to her right again and walked 15 m. Now finally she turned to her right and after walking for 7 m, she stopped at point B. What is the distance AB?
- (A) $2\sqrt{34}$ m
(B) 34 m
(C) $3\sqrt{17}$ m
(D) $2\sqrt{17}$ m
- Q62. *Teeth* is related to *Grit* in the same way as *Fist* is related to
- (A) Blow
(B) Hand
(C) Open
(D) Clench
- Q63. Introducing a girl, Rohit said, " He is the daughter of the daughter of my grandfather's only son", How is that girl related to Rohit?
- (A) Cousin
(B) Niece
(C) Father in law
(D) Nephew
- Q64. In a queue of students facing north, Ayesha and Anisha are standing at 10th and 8th position from the left and right end respectively. If another student Ariva who is 12th from the left end is exactly in between Ayesha and Anisha then find the position of Ayesha from right end?
- (A) 10th
(B) 12th
(C) 15th
(D) 8th
- Q65. In the following question, choose the correct code form. If ACID is written as 1C3D, PAMPER is written as P1MP2R, then how will BOMBAY be written?
- (A) B4MB1Y
(B) B3MB1Y
(C) B5MB2Y
(D) B4MB2Y

Direction: Read the information carefully and answer the question given below.

Number of students selected through campus placements from ten IIT colleges



Percentage of student who did not get campus placements

College	Percentage
IIT Kharagpur	75
IIT Mumbai	65
IIT Kanpur	68
IIT Chennai	62.5
IIT Delhi	65
IIT Guwahati	66.7
IIT Roorkee	66
IIT Bhubaneswar	55
IIT Gandhinagar	56
IIT Hyderabad	68

Stream wise classification of student in each college (percentage)

College	Civil engg.	Mechanical engg.	Chemical engg.	Computer engg.
IIT Kharagpur	30	20	35	15
IIT Mumbai	20	24	27	29
IIT Kanpur	22	26	32	20

IIT Chennai	34	26	22	18
IIT Delhi	18	24	27	31
IIT Guwahati	25	22	27	26
IIT Roorkee	26	28	20	26
IIT Bhubaneswar	16	34	32	18
IIT Gandhinagar	22	26	20	32
IIT Hyderabad	28	16	22	34

Q66. If the number of students selected through campus placements from college IIT Guwahati from Civil engineering, Mechanical engineering, Chemical engineering and Computer science engineering are in the ratio 6 : 5 : 3 : 2, from which stream did the highest percentage of students get selected?

- (A) Civil Engineering (B) Mechanical Engineering
(C) Chemical Engineering (D) Computer Engineering

Q67. Complete the series: 221, 109, 53, 25, 11, ?

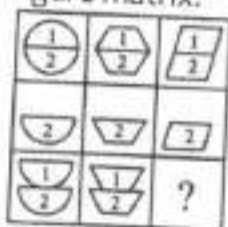
- (A) 2 (B) 4
(C) 6 (D) 8

Q68. In the following question, a statement/group of statements is given followed by some conclusions. Without resolving anything yourself, choose the conclusion which logically follows from the statement(s).

Statement - All guilty singers were arrested. Narendra and Arvind were among those arrested.

- (A) All singers are guilty.
(B) All arrested people are singers.
(C) Narendra and Arvind were not singers.
(D) Narendra and Arvind were guilty.

Q69. Select a suitable figure from the four alternatives that would complete the figure matrix.



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

(A) 1

(B) 2

(C) 3

(D) 4

Q70. What number is opposite 3 in the figure shown below? The given two positions are of the same dice whose each surface bears a number among 1, 2, 3, 4, 5 and 6.



(i)



(ii)

(A) 2

(B) 4

(C) 5

(D) 6

Skill Instructor (Electrical) GK part

71. One of the bank of which river were Alexander and Porous in a grim battle?
- (a) Jhelum
 - (b) Ravi
 - (c) Chenab
 - (d) Beas
72. Who was the ruler of medieval India who is credited with the building of the Grand Trunk Road?
- (a) Babur
 - (b) Sher Shah Suri
 - (c) Jahangir
 - (d) Krishnadeva Raya
73. Which of the following were the first Europeans to set-up trading settlements in India?
- (a) French
 - (b) Spanish
 - (c) Portuguese
 - (d) Dutch
74. International court is in
- (a) Geneva
 - (b) The Hague
 - (c) Chicago
 - (d) Switzerland
75. Which is the nearest planet to the Sun?
- (a) Venus
 - (b) Mercury
 - (c) Earth
 - (d) Mars
76. Who is called the father of Indian Constitution?
- (a) Dr. BR Ambedkar
 - (b) Dr. Rajendra Prasad
 - (c) Pt. Jawahar Lal Nehru
 - (d) Sardar Patel

77. The Imperial Bank of India, after nationalisation was given the name of
- (a) Reserve Bank of India
 - (b) Bank of India
 - (c) State Bank of India
 - (d) Indian Overseas Bank
78. When International 'Yoga Divas' is celebrated?
- (a) 1st May
 - (b) 21st June
 - (c) 25th April
 - (d) 2nd July
79. Lionel Messi, who has been chosen for Golden Boot Trophy for third time, is from which country?
- (a) Germany
 - (b) France
 - (c) Italy
 - (d) Argentina
80. Which team won the first ever Hockey World Cup title in Odisha?
- (a) Netherlands
 - (b) Belgium
 - (c) Australia
 - (d) Egypt

SKILL INSTRUCTOR (ELECTRICAL)

- Q81. RJ45 UTP cable has _____ Cables.
- A) 2 pair
 - B) 3 pair
 - C) 4 pair
 - D) 5 pair
- Q82. Registers which are partially visible to users and used to hold conditional codes (bits set by the CPU hardware as the result of operations), are known as
- A) PC
 - B) Flags
 - C) Memory Address Registers
 - D) General Purpose Registers
- Q83. Mnemonic a memory trick is used in which of the following language?
- A) Machine language
 - B) Assembly language
 - C) High level language
 - D) None of above
- Q84. Computer devices which are automatically detected by windows are called
- A) plug & play devices
 - B) automatic devices
 - C) serial devices
 - D) installed devices
- Q85. Bar which appears at bottom of computer desktop is termed as
- A) task bar
 - B) tool bar
 - C) title bar
 - D) menu bar
- Q86. ISP exchanges internet traffic between their networks by
- A) internet exchange point
 - B) subscriber end point
 - C) isp end point
 - D) none of the mentioned
- Q87. What normally happens when you delete an email?
- A) It is deleted and no longer available
 - B) It is moved to the deleted items folder and can be recovered
 - C) It is moved to the deleted items folder but can't be recovered
 - D) It is placed in the outbox

Q88. Which is the function button for spelling and grammar?

- A) F3
- B) F5
- C) F7
- D) F9

Q89. What is the correct way to refer the cell A10 on sheet3 from sheet1?

- A) sheet3!A10
- B) sheet1!A10
- C) Sheet3.A10
- D) A10

Q90. MS PowerPoint if you want to edit a chart, you can:

- A) Triple click the chart object
- B) Click and drag the chart object
- C) Double click the chart object
- D) Click the chart object

SVSU Recruitment Examination 2019
Loaded Key Sheet for : 21 - Skill Instructor (Electrical) , Set Code : A

Q.No.	Key	Q.No.	Key	Q.No.	Key	Q.No.	Key	Q.No.	Key
1 ✓	D	21 ✓	B	41 ✓	D	61 ✓	D	81 ✓	C
2 ✓	C	22 ✓	A	42 ✓	D	62 ✓	D	82 ✓	B
3 ✓	C	23 ✓	B	43 ✓	B	63 ✓	B	83 ✓	B
4 ✓	B	24 ✓	B	44 ✓	B	64 ✓	B	84 ✓	A
5 ✓	A	25 ✓	D	45 ✓	C	65 ✓	A	85 ✓	A
6 ✓	B	26 ✓	B	46 ✓	A	66 ✓	A	86 ✓	A
7 ✓	C	27 ✓	A	47 ✓	C	67 ✓	B	87 ✓	B
8 ✓	D	28 ✓	D	48 ✓	B	68 ✓	D	88 ✓	C
9 ✓	D	29 ✓	C	49 ✓	C	69 ✓	C	89 ✓	B
10 ✓	C	30 ✓	C	50 ✓	B	70 ✓	C	90 ✓	C
11 ✓	D	31 ✓	D	51 ✓	A	71 ✓	A	91	X
12 ✓	D	32 ✓	D	52 ✓	B	72 ✓	B	92	X
13 ✓	C	33 ✓	B	53 ✓	D	73 ✓	C	93	X
14 ✓	C	34 ✓	C	54 ✓	A	74 ✓	B	94	X
15 ✓	A	35 ✓	A	55 ✓	C	75 ✓	B	95	X
16 ✓	D	36 ✓	A	56 ✓	A	76 ✓	A	96	X
17 ✓	A	37 ✓	D	57 ✓	C	77 ✓	C	97	X
18 ✓	C	38 ✓	C	58 ✓	A	78 ✓	B	98	X
19 ✓	B	39 ✓	C	59 ✓	C	79 ✓	D	99	X
20 ✓	C	40 ✓	B	60 ✓	C	80 ✓	B	100	X