ADMISSION TEST



BS Electrical Engineering Fall, 2011

Faculty of Engineering & Technology International Islamic University ISLAMABAD





الجامعة الإسلامية العالمية INTERNATIONAL ISLAMIC UNIVERSITY ISLAMABAD Faculty of Engineering & Technology

BS EE Admission Test Fall 2011

Max Time: 2Hrs

basision of Total

Questions: 100

Brief Instructions to Candidates

- 1. Anyone who will violates any of the following instructions will be immediately disqualified
- 2. Please ensure that you do not have calculator, any item or information with you in the examination hall. Your mobile phone must be switched off and in your pocket.
- 3. After the paper is distributed, you are not supposed to look around, whisper, borrow or lending anything from any one.
- 4. Nobody will leave before half time.
- 5. There are total of 100 questions and total time is 120 minutes.
- 6. You will get one mark for each correct answer and zero mark for incorrect answer. Selection of more than one choice will give you zero mark.
- Once time is over, put down your pens and put the answer sheets inside the question papers

Filling In The Answer Sheets

- 8. Your answer sheet will be checked by machine. If you do not comply with the instruction, your answers will not be graded correctly.
- On the back side of the answer sheet find the space for your name and roll number.
 Write down your name in block letters and sign the sheet.
- 10. On the front of the answer sheet, every entry by you will require selecting one circle out of many. Mark the correct one by <u>COMPLETELY</u> filling in the circle representing it. Ink should not spread outside the boundary line of the circle.

- 11. Write the colour of your booklet next to your name ON THE BACKSIDE of your answer sheet.
- 12. If you fill in the wrong colour or fill it in on the front side of the sheet, the machine reader may fail you.
- 13. You can do rough work inside the question booklet wherever you like. Spare sheets are also provided at the end of the booklet
- 14. After the paper is collected, keep sitting to fill in and sign your attendance sheet which will be circulated.
- 15. All students must fill and sign their attendance sheet else they will be eliminated from the Admission test.
- 16. If you violate any instruction, your paper will be cancelled and admission refused.
- 17. Do not open the next page of the question booklet until you are told.

There are least of 100 questions and total time is 120 minutes. You will get one awaik for each cornert answer, and zero mark for memore answe

Once time terriver, put down your pone and put the answer should incade the queedor

Filling In The Assess Bheete

- Your answer shoot will be checked by machine. If you do not comply with the instruction your showers will not be graded correctly
- 9. On the back side of the answer sheet find the space for your name and roll number Write cown your estine in block letters and sign the abeet.
- 6.The the front of the answer shoet, every entry by you will require a leenng one circle out if many black the corored one in <u>COMPLETED Y</u> filling in the circle
 - shrip ent to and random of an analytic the boundary line of the pixels

1. A capacitor consists of

- (A). two dielectrics separated by a conductor
- (B). two conductors separated by a dielectric
- (C). two dissimilar metals separated by a dielectric
- (D). two dissimilar metals immersed in an electrolyte
- 2. Three resistors 2Ω , 3Ω and 4Ω are connected so that the equivalent resistance is 9Ω . The resistors are connected:
 - (A). all in parallel
 - (B). all in series
 - (C). 2Ω and 3Ω in parallel and the combination in series with 4Ω
 - (D). 2Ω and 3Ω in series and the combination in parallel to 4Ω
- 3. 1 m wire carrying a current of 1 A is placed in a uniform magnetic field of 1 T. If the wire makes an angle of 90° with the direction of magnetic field, the magnitude of the force acting on the wire is
 - (A). 0
 - (B). 1N
 - (C). 0.5N
 - (D). None of these
- Magnitude of motional emf in a rod of length L moving with velocity v across a magnetic field of strength B making θ with it is
 - (A). $LvBcos\theta$
 - (B). IBLSinθ
 - (C). vBLSin0
 - (D). None of these

5. D.C generator is similar to the A.C generator in construction with the difference that

- (A). Slip rings are replaced by Split rings
- (B). Split rings are replaced by Slip rings
- (C). Carbon brushes are removed
- (D). None of these
- 6. In ideal transformer the output ----- is equal to input -----
 - (A). Current
 - (B). Voltage
 - (C). Power
 - (D). None of these

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- 7. The magnitude of X and Y-components of a vector will be equal if the vector makes an angle with the x-axis equal to
 - (A). 60°
 (B). 45°
 (C). 30°
 (D). none of these
 - (D): none of these
- 8. If $|\vec{A} + \vec{B}| = |\vec{A} \vec{B}|$ then the angle between them is: (A). 0° (B). 90°
 - **(C).** 180°
 - **(D).** 60°

9.

 $\vec{A} \cdot \vec{B} = |\vec{A} \times \vec{B}|$ when the angle between \vec{A} and \vec{B} is:

(A). 0°
(B). 45°
(C). 60°
(D). 90°

10. When a force of 1N acts on a mass of 1kg that is free to move, the object moves with

2.0 and 3.0 in parallel and the combination is 2.0 and 3.0 in series and the combination in h

- (A). a speed of 1 m/s
- (B). a speed of 1 km/s
- (C). an acceleration 10 m/s2
- (D). an acceleration of 1 m/s2

11.When an object undergoes acceleration

- (A). its speed is always increases
- (B). its velocity is always increases
- (C). it always falls towards earth
- (D). force always act on it

12. The sum of the kinetic and potential energies of a system of objects is conserved:

- (A). only when no external force acts on the objects
- (B). only when the objects move along closed paths
- (C). only when the work done by the resultant external force is zero
- (D). none of the above

13.A body at rest is capable of doing work if:

- (A). the potential energy is positive
- (B). the potential energy is negative
- (C). it is free to move in such a way as to decrease its kinetic energy
- (D). it is free to move in such a way as to decrease the potential energy

14.Relation between linear velocity of a rotating body and its angular velocity is

- (A). $V = \omega x r$
- (B). $V = \omega$. r entropy of a second to second reaction of the second reaction of the second second
- (C). $V = r x \omega$
- 20. A string is highly fied between two points Im again. When the strin $\mathbf{r} + \boldsymbol{\omega} = \mathbf{V}$. (0)

15. Angular acceleration is produced by

- (A). Torque
- (B). Pressure
- (C). Power
- (D). Force

16. A body in satellite orbiting around the earth is weightless because

- (A). No force acts on it
- (B). The moon attracts with a force equal to its weight
- (C). it is far away from the earth
- (D). g is zero

17. The frictional effect between the different layers of a flowing fluid is described in terms of ______ of the liquid.

- (A). Resistance
- (B). viscosity
- (C). motion

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(D). elasticity

18. The time period of a 50 Hertz oscillator is

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- (A). 20 second
- (B). 50 millisecond
- (C). 20 millisecond
- (D). 50 second are all and a second as of as of we dank at even of ord at it. (O)

19.As temperature rises the speed of sound in air changes

- (A). Proportional to absolute temperature
- (B). Inversely proportional to absolute temperature
- (C). Proportional to square root of absolute temperature
- (D). Inversely proportional to square root of absolute temperature
- **20.** A string is tightly tied between two points 1m apart. When the string is plucked at the middle the wavelength generated will be
 - (A). 1m
 - (B). ½ m
 - (C). 2 m
 - (D). None of the above.

Complete the following sentences by selecting the most appropriate words from the given lettered choices (A, B, C, D, E) below each question.

Q (1-9)

21. is no better season than winter to begin training at Silver's Fitness Center

(A) When
(B) it
(C) There
(D) As it
(E) Where

22. The recent worldwide increase in oil prices has led to a demand for electric vehicles.

(A) greater
(B) greatest
(C) greatly
(D) greatness
(E) None of the above

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23. Maria has a wide range of experience, worked in technical, production and marketing positions.

(A) having
(B) has
(C) having had
(D) had
(E) had been

(A) but
(B) though
(C) only
(D) nor
(E) so

25. I was advised to arrange for insurance I needed medical treatment while I was abroad on vacation.

(A) What goes around, comes around

(A) so
(B) after
(C) in case
(D) although
(E) if

(A) to eat(B) eat(C) to have eaten(D) have eaten

(E) been eaten

27. When he came to Japan 20 years ago, he had no That he was going to end up living in Japan for so long.

(A) choice

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(B) reason(C) matter(D) idea(E) None of the above

28. being diagnosed with cancer, he did not give up his dream.

- (A) Instead of
- (B) Although
- (C) Because of
- (D) Despite
- (E) None of the above

29. We should get there immediately. The free gifts are given on the "......" basis.

- (A) What goes around, comes around
- (B) No pain, no gain
- (C) Easy come, easy go
- (D) First come, first served
- (E) None of the above

30. He asked me to bring a chair and sit_____ him.

- (A). next to
- (B). besides
- (C). towards
- (D). among

31.The frequency of DC Voltage is

(A). f=0
(B). f=∞
(C). f=50Hz
(D). f=120Hz

32. A 100 uF capacitor is connected to an alternating voltage of 24volt frequency

f= 10 Hz, the reactance of the capacitor will be

(A). 159.1 ohm

(B). 15.91 ohm

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(C). 1.5 ohm

(D). Non of the above

Den it starts to contract

33. In series RLC Circuit the condition for the Resonance Frequency fr= $1/2 \pi \sqrt{LC}$ is

(A). equals the heat input minutation work done on the gas (B). equals the heat input plus the work done on the gas (C). equals the work done on the gas minut the heat input (D) is independent of the heat input (D) $X_L = Xc$

34. The most common source of alternating voltage is:

- (A). the energy absorbed as heat equals the work done by the system on its environment.
- (B). Transformer(B). Transformer
- (C). AC generator a protection in the stand of a laupe tool as bedroeds of 1.(3)
- (D). Non of the above uper covered of the anomaly in a difference of the source of the
 - 9119

35. The average value of the alternating signal is:

10. Two opposite point charges: each of magnitude q are separated by a distance 2d. The

- (A). Zero Stential at a point P mid way between them is of the sector of
- (B). half
- (C). Both A and B
- (D). Non of the above

36.A ______ lens can be used to help the eye to see small objects distinctly.

- (A). flat
- (B). concave
- (C). convex
- (D). none of the above

37. A balloon is filled with cold air and placed in a warm room. It is NOT in thermal equilibrium with the air of the room until:

- (A). it rises to the ceiling
- (B). it sinks to the floor
- (C). it stops expanding

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(D). it starts to contract

(C) 1.5 ohm(D). Non of the above

38.According to the first law of thermodynamics, applied to a gas, the increase in the internal energy during any process:

(A).	equals the heat input minus the work done on the gas	K - K	14.
B).	equals the heat input plus the work done on the gas	No and	444
(C).	equals the work done on the gas minus the heat input	AL < AC	.(8)
D).	is independent of the heat input	R=Xi+Xc	.(3)
		Xi=Xc	D).

39.In an adiabatic process:

14. The most common source of alternating voltage is:

- (A). the energy absorbed as heat equals the work done by the system on its environment
- (B). the energy absorbed as heat equals the work done by the environment on the system
- (C). the absorbed as heat equals the change in internal energy of the OA (O)
- (D). the work done by the environment on the system equals the change in internal energy

40. Two opposite point charges, each of magnitude q are separated by a distance 2d. The electric potential at a point P mid-way between them is:

(b). Mut (c). Both A and B (b). Mon of the above (c). Inst (c). Inst (c). Inst (c). Concave (c). convex (c). conv

41.If a strip of Cu metal is placed in a solution of FeSO4 blog driv bellin at molled A

equilibrium with the air of the room until:

(B). it sinks to the floor

(C). it stops expanding

- (A). Cu will be deposited(B). Fe is precipitated out.
- (C). Cu and Fe both dissolve
- (D). No reaction takes place

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t's lo C case't

W.Isotopes of an element differ in the no. of

42. Molarity of pure water is

(A). 1(B). 18(C). 55.5

(D). 6

23. The primary difference between LAN and WAN is

43. When water freezes at 0°C, its density decreases due to ______

- C) the variety of hardware devices
- (D) The number of hardware devices

- (A). Cubic structure of ice
- (B). Empty spaces present in the structure of ice quiexe as you a gaiwollol and to dold W at
- (C). Change of bond lengths
- (D). Change of bond angles

- (B) Electronic shopping
 - (C) Online chatting
 - D)Online education

vooard format that is most commonly used is the

44. The concept of absolute zero of the temperature originates from_____

- (A). Gas laws
- (B). Plasma characteristics
- (C). Liquefaction of gases
- (D). Sublimation
- **45.**The process in which a solid, when heated, vaporizes directly without passing through the liquid phase is called.
 - (A). Vaporization
 - (B). Sublimation
 - (C). Oxygenation
 - (D). None of the above

32: A person who gains illegal access to a system;

46. The no. of atoms in one	of the element is 6.02×10^{23}
1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 - 1997 -	(B) Woran
(A). Mole	(C)Software pirate
(B). Molecule	(B)All of the above
(C). Ion	

(D). Gram

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exe. (Cl)

	42. Molarity of pure water is
(A). Electrons	
(B). Neutrons	(A). 1
(C). Protons	
(D). None of the above	(C). 55.5
48. The primary difference between LAN and WAN i	is 0.(0)
(A) The number of software programs available	43. When water freezes at 0°C its density d
(B) Distance (C) The variety of hardware devices	
(D) The number of hardware devices	
(b) The humber of hurdware devices	(A). Cubic structure of ice
19. Which of the following is not an example of elect	cronic commerce?
	(C). Change of bond lengths
(A) Electronic banking	(D). Change of bond angles
(B) Electronic shopping	
(C) Online chatting	
(C) Online chatting	
(D)Online education	
(D)Online education	
(D) Online education 50. The keyboard format that is most commonly use	ed is the
(D) Online education 50. The keyboard format that is most commonly use	4.The concept of absolute zero of the term
(D) Online education 50. The keyboard format that is most commonly use (A) QWERTY	44.The concept of absolute zero of the term
(D) Online education 50. The keyboard format that is most commonly use (A) QWERTY (B) DVORAK	4.The concept of absolute zero of the tem
(C) Online chatting (D) Online education 50. The keyboard format that is most commonly use (A) QWERTY (B) DVORAK (C) TWRITER	44.The concept of absolute zero of the temp (A). Gas laws
(C) Online chatting (D) Online education (A) QWERTY (B) DVORAK (C) TWRITER (D) SPLITTER	44.The concept of absolute zero of the tent (A). Gas laws (B). Plasma characteristics
(C) Online chatting (D) Online education 50. The keyboard format that is most commonly use (A) QWERTY (B) DVORAK (C) TWRITER (D) SPLITTER	 44.The concept of absolute zero of the temp (A). Gas laws (B). Plasma characteristics (C). Liquefaction of gases

- (B).doc (C).ext
- (D).exe

- (A), Vaporization
- B). Sublimation
- (C). Oxygenation
- (D). None of the above

52.A person who gains illegal access to a system:

- (A) Hacker
- (B) Worm
- (C) Software pirate
- (D)All of the above

53. Which of the following provides only command line interface

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(A) MAC OS (B) DOS (C) Windows OS (D) All of the above

- 54. A small image that represents a program, instruction or file is called (A) Menu

(C) Command line

(D) Icon

(B) GUI

55. A set of buttons that invoke commands in word processing document is called:

- (A)Menu character constant x (B) Button list (C) Dialogue (D) Toolbar

56.What is the function of a compiler?

- (A) It translates high level language programs into machine language.
- (B) It translates assembly language programs into machine language.
- (C) Both A & B above
- (D) None of these grant of the equation $x^2 = -16y$ has the following coordinate of (D)

57. Conditional operator Condition ? expression 1 : expression 2; is similar to 2 and (A)

- (A) If-else statement. (B) Else-if statement. (C) Both A & B above
- (D) None of these

58. What is the output of the following program:	(A). Outside the circle
void main()	(B). Inside the circle
{	(C). On the circle
int $num[] = \{10, 5, 40\};$	(D). None of the above
cout<< num[2]	

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(A)40 (B) 5 (C) error (D) None of these 59. Which of the following is a correct comment 54. A small image that represents a program, instruction or file is called /* tnammod */(A) (B) */ Comment */ (C) Both A & B above (D) None of these 60. Difference between x and 'x' is 55. A set of buttons that invoke commands in word processi (A) The first one refers to the variable whose identifier is x and second one refers to the character constant x (B) The first one is character constant x and second one is string literal x (C) Relation (D) None of these 61. Lines which do not touch the curves but distance of any point on the curve from these lines approaches zero are called (A). Conjugate axis (B). Minor axis (A) It translates high level language programs into machine language, sixs roisM .(3) (D). Asymptotes essentiates programs of in subsport statistical video essentiates and in (E) 62. A parabola given by the equation $x^2 = -16y$ has the following coordinates to another (C) (A). focus (0, 0), Vertex (0, 4), directrix y=4 congress not the object of the second (B). focus (0, 0), Vertex (0, 4), directrix x=4 (C). focus (0, -4), Vertex (0, 0), directrix y=4 (D). focus (0, 4), Vertex (0, 0), directrix x=4

63. Where does the point P(5, 6) lie w.r.t. the circle $x^2 + y^2 = 81$

- (A). Outside the circle
- (B). Inside the circle
- (C). On the circle
- (D). None of the above

36. What is the output of the following program void main()

int num[] = {10, 5, 40]; cout<< num[2]

64. If two straight lines are perpendicular to each other then,

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(A). They intersect each other	(38), 3, 6,
(B). Product of their slopes is -1	(C), 1, 8,
(C). Both a & b are true	(D). None of the above,
(D). Both a & b are false	tel a l'anna se :
x + 2x + t then $-$ fixly is	
65. Calculate the distance between two points A (2, 3) and B	(5, 7)
	(A), (
(A), 3	(11). 2.
(B). 5	(C), (L
(C). 7	(D), 6,
(D). 9	
	72. Modulus of 4 - Wis
66. Calculate the area of triangle with base = 6 cm and heigh	nt = 9cm.
our calculate the area of thangle with base of our and horge	
(A) 19 cm^2	(A), 4
(A). 10 Cm^2	6.(0)
(B). 27 cm^2	(Q), *3
(D) None of above	(D). 5
(D). None of above	
67. If a line A is perpendicular to a line B with slope -6 and Equation of this straight line A will be	its y-intercept 4/3, then
(A) $C_{m} = m + 9$	(JUV) MOUVI (V)
(A). $0y - x + 0$ (B) $6y = y + 9$	(B). (A ∩ B) ∪ C
(b). $0y \neq x = 0$ (C) $-6y = y + 8$	(C) AU(BOC) .
(D) None of above	(D) (10 8) 0C
68. If $\int_{0}^{1} (4x+k)dx = 2$, then k=	
$(\mathbf{B}) 0$	0 1]
(C) 1	A I I I I I I I I I I I I I I I I I I I
2 IS minimum 2	. /4. The rank of 0 . 1
(D). 2	0 0
69. A function f is decreasing on the interval (a, b) and $x_2 > x_2 > x_2 > x_2 > x_2 > x_2 < x_2 > x_2 < x_$	x1 if
$(A) = \mathcal{C}(a_1) > \mathcal{C}(a_2)$	in the
(A). $I(X_2) > I(X_1)$.	(8)
(B). $f(x_2) < f(x_1)$ (C). $f(x_1) = f(x_2)$	1 14
(C). $f(x_2) = f(x_1)$ (D) $f(x_2) = 0$	0.00
(D). $I(X_2) = 0$.	10 A 10 A
	(0) 2
70 The two positive integens where sum is 0 and the produc	t of one with the square of
the other will be maximum are.	25. What is the period of sin(
(A). 4, 5.	(A), 2π

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(B). 3, 6.		They intersect each other Product of their clones is cl	(A).
(C). $1, \delta$. (D). None of the above	<u>,</u>	Both a & b are true	(0)
	·1	Both a & b are false	
71. If $f(x) = \frac{1}{12} x^4 - \frac{1}{6} x^3 - \frac{1}{6} x^3$	$+\frac{1}{4}x^2 + 2x + 7$ then $\frac{a}{dx^4}$	[f(x)] is	
	points A (2, 3) and B (5,		
(A). 4.			
(B). 2.			(A).
(C)4.			(B).
(D). 6.			(U) (D)
72. Modulus of $4-3i$ is		ulate the area of triangle with	66. Cale
(A). 4			
(B). 3		18 cm ² •	.(A)
(C), -3		27 cm ²	• • (B).
(0), 5			(19)
(1). 0			
73. $A \cap (B \cup C) =$		line A is perpendicular to a br	67. If a
		in A smiththe stude of the solid	
(A) $(A \cap B) \cup (A \cap C)$		I w Fi SHH JUSIKUS SHI IO HOUD	
$(\mathbf{A}). \ (\mathbf{A} \cap \mathbf{B}) \cup (\mathbf{A} \cap \mathbf{C})$			(A).
(B). $(A \cap B) \cup C$		8+x+v8	(8).
(C). $A \cup (B \cap C)$		6y = x + 8	· .(C).
(D). $(A \cap B) \cap C$		None of above	(B)
		(4x+k)dx = 2, then $k=$	68.11
			(A).
Гі	27	0	
1 2			O
. 74. The rank of $\begin{vmatrix} 0 \\ 1 \end{vmatrix}$	2 is		(0)
	0 0	ation for Assessment of Station	A A DA
(A). 3	H IX~%X DIB 10, B/ IBV194	n aut no Sunsanzan ar i nowin	211 22 1 20
		$f(\mathbf{x}_{2}) > f(\mathbf{x}_{1})$	(A).
(B). 1		((xz) < f(xz)	(8), (
		$((x_1)) = ((x_1))$	(C).
(C). 0		$(\mathbf{x}_{2}) = 0.$	(0).
(D) 2			
	to toohing od) has 0 si a	No positivo integero autore	70. The i
75.What is the period of	$\sin(2x)$?	ther will be maximum are.	the o
(A). 2 <i>π</i>		1,6.	(A).
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			-0

(B). $\pi/2$ (C). π (D). $3\pi/4$

76. If you roll a 1m diameter wheel forward 30 cm over level ground, through what angle will the wheel turn?

(A). 30 radian 🖍

(B). 0.6 radian (C). 1 radian

(D). 5/3 radian

77. $\sin 100 + \sin 40 =$

(A). $\frac{\sin 3\theta \cos 7\theta}{2}$ (B). $2\sin 3\theta \cos 7\theta$ (C). $2\sin 3\theta \cos 7\theta$ (D). $\sin 3\theta \sin 7\theta$

78.An angle is

- _____ angle if it is in anti-clockwise direction.
- (A). Positive(B). Negative(C). Acute
- (D). Right

(A), balanced forces
(B), unbalanced forces
(C), mass
(D), electrostatic forces

at thege at 10.18

79. The sample space for tossing a coin twice is a many standard and the result in the same standard and the s

- (A). {HHH,HT,HH,TH}
 (B). {HH,HT,TH,TT}
 (C). {HHH,HTT,HH,TH}
 (D). {TT,HH,HH,TH}
- **80.** A man repays his loan of Rs. 1120. by paying Rs. 15 in the first installment and then increases the payment by Rs. 10 every month. How long (in months) will it take to clear his loan?

(A). 12.

(B). 15.

- (C). 13.
- (D). None of the above.

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81.0! Is equal to

(A). Zero

(B).a1 tadw dyuordi haven inter

(C). 2

(D). -1

82. If two objects are moving in same direction with same speed 20 Km/h then the relative speed of two objects is

(A). 0 Km/h

(B). 20 Km/h

(C). -20 Km/h

(D). 40Km/h

83. The electronic chips are made of:

- (A). silicon
- (B). iron
- (C). silver
- (D). none of these

84. The acceleration in a body is always due to _

(A). balanced forces

(B). unbalanced forces

- (C). mass
- (D). electrostatic forces

85.A golf ball is struck by a golf club and falls on a green eight feet above the tee. The potential energy of the Earth-ball system is greatest:

(A). just before the ball is struck

- (B). just after the ball is struck
- (C). just after the ball lands on the green
- (D). when the ball reaches the highest point in its flight

86.Which of the following will remain unchanged when a sound wave travels in air or in water?

- (A). Amplitude
- (B). Wavelength
- (C). Frequency
- (D). Speed

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87. Which of the following quantities is transferred during wave propagation?

(D) in must be conner the C)

treaking of the Hill (1)

ayoffa habiloratile (12)

(C), and (coffiction of M)

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sealth band day

(A). Speed(B). Mass

(C). Matter

(D). Energy

88. If
$$\int_{\frac{\pi}{2}}^{a} sinxdx = \frac{1}{2}$$
, then a=?

(A). 0 (B). 1 (C). $-\frac{\pi}{2}$ (D). $-\frac{\pi}{3}$

89. If $f(x) = \frac{x+2}{3}$, then $f^{-1}(x) = ?$

(A). 3x - 2(B). $2x^{-3}$ (C). $\frac{3}{x+2}$ (D). None of the above

90.In endothermic reactions, the heat content of the _____

(A). Products is more than that of reactants

(B). Reactants is more than that of products

(C). Both (a) and (b)

(D). Reactants and products are equal

91. return 0, statement in the main function indicates

(A) Program worked as expected without any errors during its execution.

(B) Program did nothing. Completed zero task.

(C) Not to end program yet.

(D) None of these

92. Evaluate (6 && !(0 | | 1))

(A) false

- (B) true
- (C) error
- (D) None of these

93. For step-up transformer

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- (A). N_s must be equal to N_p and benefitied at a set to support would be the definition of the set of th
- (B). N_s must be less than N_p
- (C). N_s must be greater than N_p
- (D). None of these

94. How many times per second will an incandescent lamp reach its maximum brilliance when connected to a 50Hz source.

- (A). 100 times
- **(B).** 50times
- (C). Will remain constant
- (D). Non of the above

95. The inverse of a square matrix is.....

(A).
$$\frac{1}{\det A} (adjoint of A)^T$$

(B). $\frac{1}{\det A} (cofactor of A)^T$
(C). $\frac{1}{\det A} (cofactor of A)$

(D). None

96. An equation which contains one or more square root terms is calledequation

- (A). Quadratic
- (B). Linear
- (C). Radial
- (D). Polynomial

97. The sum of two consecutive integers is 9 and their square differs by 27. These two consecutive integers are.....

- (A). -7, 2
- (B). 19, -10
- (C). 7, 2
- (D). None

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(D) None of these

98. If roots of $px^2 + qx + c = 0$ are reciprocal of each other then

(A). p = -c **(B).** -p = c

I

- (C). p = c
- **(D).** q = c

99. Resolve into partial fractions

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

\$

(A).
$$\frac{3}{x^2+1} - \frac{2}{x+3}$$

(B). $\frac{x}{x^2+1} - \frac{1}{x+3}$
(C). $\frac{x-3}{x^2+1} + \frac{2}{x+3}$
(D). $\frac{2x-3}{x^2+1} - \frac{2}{x+3}$

100. If $a_{n-3} = 2n-5$, Find nth term of the sequence

(A). 2n+3

- (B). 2n-4 (C). 2n+1
- (D). None of the above