Online Examinations (Even Sem/Part-I/Part-II Examinations 2020 - 2021

Course Name - - Physics II Course Code - DCSE202

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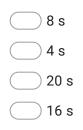
DIP.ME PGDHM

_ .. . _ _

- MBA M.SC.(BT)
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- M.SC.(MSJ)
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- M.SC.CS)
- M.SC.(ANCS)
- M.SC.(MM)
- B.A.(Eng)

Answer all the questions. Each question carry one mark.

9. 1. A particle is thrown vertically upward with a velocity 40 ms-1 from the ground. It will reach the ground after



10. 2. Magnitude of displacement from initial position to final position is

Mark only one oval.

- _____ straight line
- curved line
- none of these
- 11. 3. Displacement is a

Mark only one oval.

- 🔵 scalar quantity
- vector quantity
- Derived quantity
- ____ none of these
- 12. 4. SI unit for force is

- 🔵 Kilograms
- Newton
- Joules
- Acceleration

13. 5. "Energy can neither be created nor be destroyed, but it can be changed from one form to another", this law is known as

Mark only one oval.

- kinetic energy
- ____ potential energy
- conservation of energy
- conservation principle
- 14. 6. Momentum is conserved in

Mark only one oval.

- ____ an elastic collision of two balls
- ____ an inelastic collision of two balls
- ______ the absence of an external force
- 🔵 all of these
- 15. 7. A gun recoiling when it is fired is an example of



- conservation of angular momentum
- conservation of energy
- none of these

16. 8. A car traveling at a speed of 40 km/hr increases its speed to 80 km/hr. As a result its kinetic energy increases

Mark only one oval.

- 2 times 4 times 8 times
- none of these
- 17. 9. What happens to the body on which work is done

Mark only one oval. it loses energy it gains energy no change in the energy first it loses then it gain

18. 10. A mass is revolving in a circle which is in the plane of the paper. The direction of angular acceleration

- _____ upward to the radius
- 🔵 towards the radius
- tangential
- _____ at right angle to angular velocity

19. 11. When a body falls freely under gravity, then the work done by the gravity is

Mark only one oval.

\bigcirc	positive
\bigcirc	negative
\bigcirc	zero
\bigcirc	infinity

20. 12. The commercial unit of Energy is

Mark only one oval.

\subset	Watt
\square	Watt-hour
\square	Kilowatt-hour
	Kilowatt

21. 13. Joule/second is related to

Mark only one oval.



Pascal

_____ Torr

22. 14. In order to do work, energy is

Mark only one oval.

- transferred or converted
- ____ used up
- ____ lost
- lost or transferred
- 23. 15. Which of the following processes requires the most work

Mark only one oval.

- A person holds a 1kg weight stationary with outstretched arms
- A person lifts a 1kg weight 1m off the floor
- A person lifts a 10kg weight 1m off the floor
- A 10kg weight rests on a table
- 24. 16. What are the units of power

- Horsepower
- Joules per second
- Watts
-) all the choices are correct

25. 17. Unit of electric charge is

Mark only one oval.
Coulomb
Coulomb/sec
Volt
None of these

26. 18. The resistance of two lamps connected in a series across a battery is in the ratio 4:5. Their power will be in the ratio

Mark only one oval.

- 4:5 5:4 16:25 25:16
- 27. 19. An electric heater is rated 1100W at 220V. The amount of energy consumed in kilowatt-hr by it in 4 hour is

- 2.2
- 4.4
- 6.2
- 2.1

28. 20. Least current will flow through

Mark only one oval.

25 ohm resistor

- 5 ohm resistor
- 15 ohm resistor
- 18 ohm resistor
- 29. 21. A circuit contains two equal resistances in parallel

Mark only one oval.

- current is same in both
- large current flows in larger resistor
- potential difference across each is same
- smaller resistance has smaller conductance
- 30. 22. In superconductivity the conductivity of a material becomes

Mark only one oval.

Zero

- Finite
- Infinite
- None of these

31. 23.In order to increase range of ammeter, value of shunt resistance is

Mark only one oval.

increased decreased unchanged zero

32. 24. An ammeter should have resistance

Mark only one oval.

- infinite
- 🔵 very large
- _____ very low
- none of these
- 33. 25. Heating effect of electric current is used in

Mark only one oval.

electric kettle
fan
freezer
TV

34. 26. Current produces magnetic effect due to its

Mark only one oval.

mechanical energy

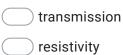
🔵 magnetic field

electrical field

chemical energy

35. 27. Reciprocal of resistance is called

Mark only one oval.



inspection

conductance

36. 28. Thermocouple is source of current that converts heat energy to

Mark only one oval.

chemical energy

mechanical energy

solar energy

electrical energy

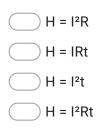
37. 29. Current-voltage graph of ohmic devices is a

Mark only one oval.

linear graph

- ____ non-linear graph
- ____ parabolic graph
- ____ hyperbola graph
- 38. 30.Heat produced by current in wire during 't' time is

Mark only one oval.



39. 31. Resistances used in circuit of Wheatstone bridge are

Mark only one oval.



5

40. 32. Sunlight is directly converted into electrical energy by using

Mark only one oval.

cellssolar cellselectric generator

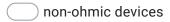
- electrical energy
- 41. 33. When condition R1/R2 = R3/R4 is satisfied, current in galvanometer of Wheatstone bridge is

Mark only one oval.

\bigcirc	1
\bigcirc	0
\bigcirc	minimum
\bigcirc	Maximum

42. 34. Filament bulbs are best examples of the

Mark only one oval.



resistive devices

ohmic devices

electric devices

43. 35. "Sum of all currents meeting at a point is zero", stated law is

Mark only one oval.

📃 Kirchhoff's first law

- Kirchhoff's second law
- Kirchhoff's third law
- Kirchhoff's fourth law
- 44. 36. No force acts on a current carrying conductor when it is placed

Mark only one oval.

- perpendicular to the magnetic field
- parallel to the magnetic field
- far away from the magnetic field
- inside a magnetic field
- 45. 37.Which instrument is used for converting electrical energy into mechanical energy

- Electric generator
- Electric motor
- Electric iron
- Electric oven

46. 38. A fuse wire is

Mark only one oval.

a conductor

- ____ an insulator
- a semi-conductor
- made of any material
- 47. 39. Lenz's law is based on

Mark only one oval.

charge

momentum

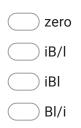
_____ energy

48. 40. The SI unit of self-inductance is

Mark only one oval.

Gauss Henry Tesla None of these 49. 41. The force on a conductor of length I carrying current i, placed perpendicular to a uniform magnetic field B is

Mark only one oval.



50. 42. Who has stated the Right hand Thumb Rule?

Mark only one oval.

- Orsted
- Fleming
- Einstein
- Maxwell
- 51. 43. The magnetic field inside a solenoid is

- uniform throughout
- 🔵 zero

52. 44. What is the unit of magnetic field?

Mark only one oval.

C Tesla
Faraday
Newton
Newton / meter

53. 45. A semiconductor has generally valence electrons.

Mark only one oval.

- 2 3 4 5
- 54. 46. When a pure semiconductor is heated, its resistance

Mark only one oval.

Goes up Goes down Remains the same Can't say

https://docs.google.com/forms/d/193sYIWtOSOKbbdXXcKV0P87fqnyn8CQ4FV-uGejBMb0/edit

55. 47. Addition of pentavalent impurity to a semiconductor creates many

Mark only one oval.

Free electrons

____ Holes

- Valence electrons
- Bound electrons
- 56. 48. Which of the following is a semi-conductor

Mark only one oval.

- Diamond Arsenic
- Phosphorous
- Gallium arsenide
- 57. 49. A semiconductor has.... temperature co-efficient of resistance.

Mark only one oval.

Zero
Positive
Negative

None of these

58. 50. In semiconductor the forbidden energy gap lies

Mark only one oval.

- Just below the conduction band
- Just above the conduction band
- Either above or below the conduction band
- Between the valence band and conduction band
- 59. 51. Bridge rectifier is an alternative for

Mark only one oval.

- Full wave rectifier
- Peak rectifier
- Half wave rectifier
- None of the mentioned
- 60. 52. A simple diode rectifier has 'ripples' in the output wave which makes it unsuitable as a DC source. To overcome this one can use

- A capacitor in series with a the load resistance
- A capacitor in parallel to the load resistance
- Both of the mentioned situations will work
- None of the mentioned situations will work

61. 53. The depletion region with in a p-n junction is reduced when the junction has

Mark only one oval.

Zero bias Forward bias Reverse bias All of these

62. 54. A silicon p-n junction diode in forward biased condition has a voltage drop closer to

Mark only one oval.



63. 55. The arrow direction in diode symbol indicates

- Direction of electron flow
- Direction of hole flow
- Opposite to the direction of hole flow
- None of these

64. 56. Avalanche breakdown in a diode occurs when

Mark only one oval.

- Potential barrier is reduced to zero
- Forward electric current exceeds certain value
- Reverse bias exceeds a certain value
- None of these
- 65. 57. In He-Ne laser neon atoms get energy

Mark only one oval.

- 🔵 on collision with He atoms
- from chemical reactions
- from electrical pumping
- from optical pumping
- 66. 58. In lasing action, the spontaneous emission does not depend on

- _____ the number of atom present in excited state
- the intensity of incident light
- both of them
- none of these

67. 59. The wavelength of of He-Ne laser is

Mark only one oval.

632.8 nm 600 nm 532.8 nm 500 nm

68. 60. Which process gives the laser its special properties as an optical source

Mark only one oval.

- Dispersion
 Stimulated absorption
 Spontaneous emission
- Stimulated emission

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