PUBLIC WORKS DEPARTMENT

DEPARTMENTAL EXAMINATION OF ELECTRICIAN GRADE-I UNDER P.W.D., 2024

ENGINEERING PAPER

(100 MARKS)

Signature of Invigilator _____

CODE NO.
(For Official use)

MARK TABULATION			
Question No.	**Marks carried by each question**	**No. of correct answers**	**Marks**
SECTION - A I. 1-90	**1**		
SECTION - B II. 1.	**10**		

Signature of Examiner_____

Signature of Scrutiniser _____

PUBLIC WORKS DEPARTMENT

DEPARTMENTAL EXAMINATION OF ELECTRICIAN GRADE-I UNDER P.W.D., 2024

ENGINEERING PAPER

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Roll No. _____

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Time allowed : 3 hours **Full Marks : 100**
Pass Marks : 40

SECTION – A (90 Marks)

I. Choose the correct answer (Each question carries 1 mark)
(Put a tick mark (✓) against the correct answer in the bracket ( )

(1) Grade-I Recess/conceal type of copper wiring with PVC pipe:-
a) FRLS pipe HFFR copper wire ( ) b) FRLS pipe with FRLS&H copper wire ( )
c) FRLS pipe with FR copper wire ( ) d) All of the above ( )
e) None of the above ( )

(2) Grade-II Recess/conceal type of copper wiring with PVC pipe:-
a) PVC conduit pipe (heavy duty) with HFFR copper wire ( )
b) PVC conduit pipe (heavy duty) with FRLS&H copper wire ( )
c) PVC conduit pipe (heavy duty) FR copper wire ( )
d) All of the above ( )
e) e) None of the above ( )

(3) Grade-III Recess/conceal type of copper wiring with PVC pipe:-
(a) PVC conduit pipe (Medium duty) with HFFR copper wire ( )
(b) PVC conduit pipe (Medium duty) with FRLS&H copper wire ( )
(c) PVC conduit pipe (Medium duty) FR copper wire ( )
(d) All of the above ( )
(e) None of the above ( )

(4) Grade-I Surface type wiring with Casing & Capping pipe:-
(a) PVC Casing & Capping pipe grade-I with HFFR copper wire ( )
(b) PVC Casing & Capping pipe grade-I with FRLS&H copper wire ( )
(c) PVC Casing & Capping pipe grade-I with FR copper wire ( )
(d) All of the above ( )
(e) None of the above ( )

(5) Grade-II Surface type wiring with Casing & Capping pipe:-
(a) PVC Casing & Capping pipe grade-II with HFFR copper wire ( )
(b) PVC Casing & Capping pipe grade-II with FRLS&H copper wire ( )
(c) PVC Casing & Capping pipe grade-II with FR copper wire ( )
(d) All of the above ( )
(e) None of the above ( )

(6) Grade-III Surface type wiring with Casing & Capping pipe:-
(a) PVC Casing & Capping pipe grade-II with HFFR copper wire ( )
(b) PVC Casing & Capping pipe grade-II with FRLS&H copper wire ( )
(c) PVC Casing & Capping pipe grade-II with FR copper wire ( )
(d) All of the above ( )
(e) None of the above ( )

(7) Grade-I Industrial type wiring with Steel conduit pipe:-
(a) ISI steel conduit pipe with HFFR copper wire ( )
(b) ISI steel conduit pipe with FRLS&H copper wire ( )
(c) ISI steel conduit pipe with FR copper wire ( )
(d) All of the above ( )
(e) None of the above ( )

(8) Grade-II Industrial type wiring with Steel conduit pipe:-
(a) Steel (MS) black conduit pipe (heavy Duty) with HFFR copper wire ( )
(b) Steel (MS) black conduit pipe (heavy Duty) with FRLS&H copper wire ( )
(c) Steel (MS) black conduit pipe (heavy Duty)with FR copper wire ( )
(d) All of the above ( )
(e) None of the above ( )

(9) Grade-III Industrial type wiring with Steel conduit pipe:-
(a) Steel (MS) Black conduit pipe (medium duty)with HFFR copper wire ( )
(b) Steel (MS) Black conduit pipe (medium duty)with FRLS&H copper wire ( )
(c) Steel (MS) Black conduit pipe (medium duty) with FR copper wire ( )
(d) All of the above ( )
(e) None of the above ( )

(10) Standard depth of a underground cable trenches is about :-
(a) 1.0 meter depth ( ) (b) 1.5 meter depth ( )
(c) 2.0 meter depth ( ) (d) 2.5 meter depth ( )
(e) All of the above ( )

(11) Standard cable laying in a standard trench includes
(a) Sand cushioning at the bottom ( ) (b) Brick laying below the cables ( )
(c) Brick laying above the cables ( ) (d) Sand cushioning at the above bricks ( )
(e) All of the above ( )

(12) The underground cable are laying successfully without physical damages, but within a short period of time the cable start puncturing and damage, what will be the reasons:-
(a) Due to the turning radius of cable is less than the prescribe turning radius ( )
(b) Due to the turning radius of cable is more than the prescribe turning radius ( )
(c) Due to the soil condition ( )
(d) Due to the temperature rise ( )
(e) None of the above ( )

(13) L.T cable standard voltage grade is :-
(a) 1000 Volts ( ) (b) 1100 Volts ( )
(c) 11 KV ( ) (d) 33 KV ( )
(e) None of the above ( )

(14) What type of cable can be laid in the cable tray:-

(a) Power and Control Tray Cable (Type TC) – NEC Article 340 ( )
(b) Power Limited Tray Cable (Type PLTC) – NEC Sections 725-61 and 725-71 ( )
(c) Instrument Tray Cable (Type ITC) – NEC Article 727 ( )
(d) Optical Fiber Cables – Article 770 ( )
(e) All of the above ( )

(15) Is it necessary to provide tie-down cables installed in a cable tray?

(a) Yes necessary ( ) (b) Not required ( )
(c) As per your wishes ( ) (d) Only in big buildings ( )
(e) None of the above ( )

(16) Can high voltage cables be installed in cable trays?

(a) Yes. NEC permits type MC (Article 334) and type MV (Article 326) in industrial establishments ( )
(b) No. NEC do not permits type MC (Article 334) and type LV (Article 326) in industrial establishments ( )
(c) Only L.T cables are allowed ( )
(d) Only signal & communication cable are allowed ( )
(e) None of the above ( )

(17) What is used to create contrast and control the light intensity?

(a) Troffer ( ) (b) Dimmer ( )
(c) Accent switcher ( ) (d) Diffuser ( )
(e) None of the above ( )

(18) What type of light is best suited for outdoor parking?

(a) Low pressure sodium ( ) (b) Metal halide ( )
(c) High intensity disc ( ) (d) Lamp post ( )
(e) None of the above ( )

(19) A type of light that is banned by the government?

(a) Halogen ( ) (b) CFL ( )
(c) Incandescent ( ) (d) Metal halide ( )
(e) None of the above ( )

(20) Bus Bar rating of the LT Panel Board must be:-

(a) More than the rating of incoming main switch ( )
(b) Lesser than the rating of incoming Main switch ( )
(c) Equal to the rating of the incoming main switch ( )
(d) Must be equal to the addition of all outgoing M/S, MCCB & MCB rating in total ( )
(e) None of the above ( )

(21) Feeder Pillar Panel is particularly meant for :-

(a) Indoor L.T Panel ( ) (b) Out door L.T panel ( )
(c) Both indoor & out door L.T Panel ( ) (d) For street light only ( )
(e) None of the above

(22) Vertical MCB DB is meant for :-

(a) Single phase incoming and single phase outgoing ( )
(b) Three phase incoming and single phase out going ( )
(c) Three phase incoming and three phase out going ( )
(d) Single phase incoming and three phase out going ( )
(e) None of the above ( )

(23) What type of distribution boards that become obsolete nowadays :-

(a) Kit Kat type DB ( ) (b) Bus bar DB ( )
(c) Tapping terminal DB ( ) (d) Jointing in the junction boxed ( )
(e) All of the above ( )

(24) A light source with a candle worth of power produces :-

(a) One lumen/ radian ( ) (b) One lumen /watt ( )
(c) One lumen / steradian ( ) (d) One lumen/ meter ( )
(e) None of the above ( )

(25) Lux is unit of which physical quantity?

(a) Luminance ( ) (b) Luminous intensity ( )
(c) Illumination ( ) (d) Luminous flux ( )
(e) None of the above ( )

(26) Calculate the total illumination level per meter in a given room of 200 sqm, where UF=0.7 DF=1.2 in a reading room=300 lux/m :-

(a) 102857 lux/sqm ( ) (b) 20875 lux/sqm ( )
(c) 9524 lux/sqm ( ) (d) 5519 lux/sqm ( )
(e) None of the above ( )

(27) Lamp efficiency is measured in :-

(a) Lumen/watt ( ) (b) Lumen/lux ( )
(c) Candella/watt ( ) (d) Lux/watt ( )
(e) None of the above ( )

(28) As per ISI, in a building, the illumination required for Kitchen is :-

(a) 100 lux ( ) (b) 150 lux ( )
(c) 200 lux ( ) (d) 50 lux ( )
(e) None of the above ( )

(29) Which of the following lamps is used in sport stadiums ?

(a) Compact fluorescent lamp ( ) (b) Ultraviolet lamp ( )
(c) Incandescent lamp ( ) (d) Sodium vapour lamp ( )
(e) LED lamp ( ) (f) None of the above ( )

(30) Electrical Plan drawing used to be drawn on the Architectural drawing of :-

(a) Detailed Drawing ( ) (b) Side elevation drawing ( )
(c) Plan drawing ( ) (d) not base on Architectural drawing( )
(e) None of the above ( )

(31) In Electrical Plan drawing the following is included the following locations :-

(a) Switch board ( ) (b) Lighting/luminaires ( )
(c) Main switch/LT Panel ( ) (d) MCB DB/DB ( )
(e) All of the above ( )

(32) All Junior Engineer/Electrician/wireman must have a skilled to write and read the following drawings:-

(a) Electrical Plan drawing ( ) (b) Electrical Circuit Diagram ( )
(c) Architect Plan drawing ( ) (d) Power flow diagram ( )
(e) All of the above ( )

(33) Electrical Circuit diagram are always drawn in:-

(a) Single line diagram (SLD) ( ) (b) Two-dimensional drawing ( )
(c) Three-Dimensional drawing ( ) (d) Simple plan drawing ( )
(e) None of the above ( )

(34) Electrician must know how to do the connection in whole wiring system by :-

(a) Electrical Plan drawing ( ) (b) Electrical Circuit Diagram ( )
(c) Architect Plan drawing ( ) (d) Power flow diagram ( )
(e) All of the above ( )

(35) Electrician must know the positioning of lighting fixture/luminaires in the whole building Internal electrification system from :-

(a) Electrical Plan drawing ( ) (b) Electrical Circuit Diagram ( )
(c) Architect Plan drawing ( ) (d) Power flow diagram ( )
(e) All of the above ( )

(36) Power flow diagram is used for designing the electrical switch gears of the followings:-

(a) L.T Panel Board ( ) (b) Main Distribution Board ( )
(c) Sub-Distribution board ( ) (d) Floor Panel board ( )
(e) All of the above ( )

(37) The standard of wire sizes in the electrical wiring are decided by :-

(a) Total numbers DBs ( ) (b) The sizes of the DBs ( )
(c) The sizes of ceiling Fan ( ) (d) The total load in the circuit ( )
(e) None of the above ( )

(38) In the load Calculation 15/16 Amperes power plug is taken as :-

(a) 2000 watts ( ) (b) 1000 watts ( )
(c) 1500 watts ( ) (d) 100 watts ( )
(e) None of the above ( )

(39) In the load Calculation 5/6 Amperes power plug is taken as :-

(a) 200 watts ( ) (b) 300 watts ( )
(c) 500 watts ( ) (d) 100 watts ( )
(e) None of the above ( )

(40) The safety factor normally used at the time of designing L.T Panel in a switch Gears as :-

(a) 500 % ( ) (b) 400 % ( )
(c) 200 % ( ) (d) 100 % ( )
(e) None of the above ( )

(41) MCB Sub-Distribution Board (SDB) is for distribution of :-

(a) Single phase wiring ( ) (b) Two phase wiring ( )
(c) Three phase wiring ( ) (d) Four phase wiring ( )
(e) None of the above ( )

(42) Load Line MCB Vertical Distribution Board is utilized for replacing the low load (around 100 to 125 Amps) of :-

(a) Big Main switch ( ) (b) High rating Bus Bar ( )
(c) Main/Floor L.T Panel Board ( ) (d) MCCB ( )
(e) None of the above ( )

(43) When the building Total Electrical Load is more than 20 KW. Best option for designing switch gear will be :-

(a) Only Main switch ( ) (b) Main switch with bus bar ( )
(c) Standard L.T Panel ( ) (d) MCB Distribution board ( )
(e) All of the above ( )

(44) In a protective measures, MCB will protected the electrical system from :-

(a) Surge Voltage ( ) (b) Surge Current ( )
(c) Lightning strike ( ) (d) Leakage current ( )
(e) All of the above ( )

(45) In aluminium wire standard calculation of wire size :-

(a) 2 Amps = 1 Sqmm ( ) (b) 1 Amps = 1 Sqmm ( )
(c) 1 Amps = 0.5 Sqmm ( ) (d) 5 Amps = 1 Sqmm ( )
(e) None of the above ( )

(46) The best Earthing commonly used by PWD Mizoram is :-

(a) Pipe Earthing ( ) (b) G.I Plate Earthing ( )
(c) Copper Plate Earthing ( ) (d) Maintenance free/Chemical Earthing ( )
(e) All of the above ( )

(47) The best Lightning arrestor system Commonly used by PWD Mizoram is :-

(a) ESE type Arrestor ( ) (b) Copper Five finger system ( )
(c) Steel/Aluminium five finger system ( ) (d) Steel/Copper single spike system ( )
(e) All of the above ( )

(48) Chemical Earthing system components includes :-

(a) Chemical earthing rod ( ) (b) Back filling compound ( )
(c) Ground improvement material ( ) (d) Earth pit cover ( )
(e) All of the above ( )

(49) ESE Lightning arrestor cannot be functioned properly without :-

(a) Lightning counter ( ) (b) Testing Joint Box ( )
(c) Surge protection device ( ) (d) Good Earthing ( )
(e) All of the above ( )

(50) ESE Lightning arrestor can be measured and tested by means of :-

(a) Multimeter ( ) (b) Testing joint Box ( )
(c) Lightning rod tester ( ) (d) Lightning counter ( )
(e) All of the above ( )

(51) Life span of conceal wiring is about : -

(a) 100 years ( ) (b) 200 years ( )
(c) 50 years ( ) (d) 25 years ( )
(e) None of the above ( )

(52) Casing Capping wiring is surface type of wiring and It is: -

(a) Permanent type of wiring ( ) (b) Permanent but temporary by nature ( )
(c) Temporary but Permanent by Nature ( ) (d) Temporary type of wiring ( )
(e) None of the above ( )

(53) The best material for conceal wiring pipe is :-

(a) UPVC Conduit pipe ( ) (b) Heavy Duty PVC Pipe ( )
(c) Medium Duty PVC pipe ( ) (d) Steel Conduit pipe ( )
(e) G.I Conduit pipe ( ) (f) All of the above ( )

(54) In the three phase wiring system, the phase to neutral voltage become 400 volts , what will be the faulty in the electrical wiring system :-

(a) One phase in RYB does not give power ( ) (b) The earthing is fail ( )
(c) There is a fault in three phase wiring system ( ) (d) There is a short circuit in neutral ( )
(e) All of the above ( )

(55) The voltage grade of PWD approve copper wires is :-

(a) 650 volts ( ) (b) 440 Volts ( )
(c) 250 Volts ( ) (d) 230 Volts ( )
(e) 1100 Volts ( ) (f) None of the above ( )

(56) What is the primary function of a Diesel Generating Set

(a) To purify water ( ) (b) To cool the environment ( )
(c) To produce electricity ( ) (d) To generate heat ( )
(e) None of the above ( )

(57) Which component of a Diesel Generating set converts mechanical energy into electrical energy

(a) Turbocharger ( ) (b) Radiator ( )
(c) Alternator ( ) (d) Fuel tank ( )
(e) None of the above ( )

(58) What is the purpose of the Diesel engine in a Diesel Generating set ?

(a) To cool the generator ( ) (b) To provide backup power ( )
(c) To convert fuel into mechanical energy ( ) (d) To regulate voltage output( )
(e) None of the above ( )

(59) What is the role of a governor in a Diesel Generating set?

(a) To control the generator's fuel supply ( ) (b) To lubricate the engine ( )
(c) To monitor the exhaust emissions ( ) (d) To switch between power source ( )
(e) None of the above ( )

(60) The typical frequency (in hertz) of a electricity generated by a Diesel Generating set must be in the range of –(to check the engine speed)

(a) 60 Hz- 70 Hz ( ) (b) 45 Hz -50 Hz ( )
(c) 25 Hz- 30 Hz ( ) (d) 75 Hz- 80 Hz ( )
(e) All of the above ( )

(61) Generator transformers are :-

(a) Step-up transformers ( ) (b) Step-down transformers ( )
(c) Auto-transformers ( ) (d) One-one transformers ( )
(e) None of the above ( )

(62) Which of the following is one of the criteria of selecting particular generator transformer?

(a) Low HV voltage ( ) (b) Low LV currents ( )
(c) High impedance ( ) (d) On-load tap-changer ( )
(e) None of the above ( )

(63) Which of the following does not follow the criteria of station transformer?

(a) LV at 11 kV ( ) (b) HV at 275-400 kV ( )
(c) Low impedance ( ) (d) On-load tap-changer required ( )
(e) None of the above ( )

(64) Operating load factor of station transformer must be :-

(a) Low ( ) (b) High ( )
(c) zero ( ) (d) Infinite ( )
(e) None of the above ( )

(65) The efficiency of any Electrical machines is maximum when it is operated in :-

(a) No Load ( ) (b) Half Load ( )
(c) Rated Load ( ) (d) More than rated load ( )
(e) None of the above ( )

(66) Permanent magnet moving coil ammeter :-

(a) Is used for measuring of direct current ( )
(b) Is used for the measurement of both alternating and direct currents ( )
(c) Produces torque for deflection of pointer proportional to I^2 where I is the total current flow in the circuit in amperes ( )
(d) Is used for measurement of alternating current ( )
(e) None of the above ( )

(67) If a 100 watts bulb is used for 10 hours, then the amount of electrical energy consumed will be-

(a) 100 watts ( ) (b) 1 KWh (1 unit of energy) ( )
(c) 1000 Watts (1KW) ( ) (d) More than one of the above ( )
(e) None of the above ( )

(68) The errors in the measurement which arise due to unpredictable fluctuation in temperature and voltage supply are :-

(a) Instrument errors ( ) (b) Personal errors ( )
(c) Least county errors ( ) (d) Random errors ( )
(e) All of the above ( )

(69) When the pointer of an indicating instrument is in motion, then the deflecting torque is opposed by:

(a) Damping torque ( ) (b) Controlling torque ( )
(c) Both damping torque and controlling torque ( ) (d) Rotating torque ( )
(e) None of the above ( )

(70) A Galvanometer is used to :-

(a) Detect the direction of light ( ) (b) Detect the direction of current ( )
(c) Detect the direction of magnetic induction ( ) (d) Detect the direction of sound ( )
(e) None of the above ( )

(71) One ton of refrigeration in the S.J. unit is:-

(a) 840 kJ/min ( ) (b) 420 kJ/unit ( )
(c) 21 kJ/unit ( ) (d) 210 kJ/unit ( )
(e) None of the above ( )

(72) At a domestic refrigerator's back, the bank of tubes is known as:

(a) Evaporator tubes ( ) (b) Condenser tubes ( )
(c) Capillary tubes ( ) (d) Refrigerant cooling tubes ( )
(e) None of the above ( )

(73) Which of these types of compressors are used in our domestic inverter refrigerators?

(a) Rotary ( ) (b) Centrifugal ( )
(c) Piston Type Reciprocating ( ) (d) Miniature Sealed Unit ( )
(e) None of the above ( )

(74) Why split AC become very popular ?

(a) Can fix it on window ( ) (b) Take less current ( )
(c) Silent operation ( ) (d) Very cheap ( )
(e) None of the above ( )

(75) The minimum size car recommended for single purpose buildings is one suitable for a duty load of. For office buildings cars with capacities up to 2040kg are recommended as per requirement.

(a) 884 kg ( ) (b) 874kg ( )
(c) 864kg ( ) (d) 900 kg ( )
(e) None of the above ( )

(76) Name the account name which must be submitted along the supply bills is

(a) Material at site account ( ) (b) Provisional site account ( )
(c) Stock suspense account ( ) (d) DG&SD purchase account ( )
(e) All of the above ( )

(77) The materials purchased for the work must be received by;-

(a) Executive Engineer ( ) (b) Sub-Divisional Officer ( )
(c) Junior Engineer ( ) (d) Account Officer ( )
(e) All of the above ( )

(78) The purchased materials kept in the store must have material at site and must be maintained by:-

(a) Executive Engineer ( ) (b) Sub-Divisional Officer ( )
(c) Junior Engineer ( ) (d) Account Officer ( )
(e) All of the above ( )

(79) If the work taken up in the form of Departmental, The materials issue must be incorporate with :-

(a) The actual works ( ) (b) The MR sheet closing ( )
(c) The actual processing of Bills ( ) (d) The actual completion of works ( )
(e) All of the above ( )

(80) The purchased materials but not utilized must have :-

(a) Materials at site account the materials exhausted ( )
(b) Stock site account till the material exhausted ( )
(c) T&P account till the material exhausted ( )
(d) Works account till the materials exhausted ( )
(e) All of the above ( )

(81) The first Mizoram PWD Scheduled of rates for electrical works part-I(internal) & Mizoram PWD analysis of rates for electrical works Part-I (internal) was prepared with the format and co-efficient of :

(a) Assam PWD Analysis of Rates for electrical work part-1 (internal) 2000 ( )
(b) West Bengal PWD Analysis of Rates for electrical work part-1 (internal) 1998 ( )
(c) CPWD Analysis of Rates for electrical work part-1 (internal) 1994 ( )
(d) CPWD Analysis of Rates for electrical work part-1 (internal) 2009 ( )
(e) None of the above ( )

(82) The first Mizoram PWD Scheduled of rates for electrical works part-I (internal) & Mizoram PWD analysis of rates for electrical works Part-I (internal) was published in the year of :-

(a) 1994 ( ) (b) 2002 ( )
(c) 2006 ( ) (d) 2016 ( )
(e) None of the above ( )

(83) The latest Mizoram PWD Scheduled of rates for electrical works part-I(internal) & Mizoram PWD analysis of rates for electrical works Part-I (internal) was published in the year of :-

(a) 1994 ( ) (b) 2002 ( )
(c) 2006 ( ) (d) 2016 ( )
(e) None of the above ( )

(84) In the latest Mizoram PWD Analysis of rate for electrical works part-I(internal) & Mizoram PWD analysis of rates for electrical works Part-I (internal) there are different type of wiring grade :-

(a) Four grades i.e Grade-I, Grade-II, Grade-III & Grade-IV ( )
(b) Three grades i.e Grade-I, Grade-II & Grade-III ( )
(c) Two grades i.e Grade-I &Grade-II, ( )
(d) Five grades i.e Grade-I, Grade-II, Grade-III , Grade-IV & Grade-V ( )
(e) None of the above ( )

(85) In the latest Mizoram PWD Analysis of rate for electrical works part-I(internal) & Mizoram PWD analysis of rates for electrical works Part-I (internal) there are different type of wiring :-

(a) Four types i.e A-type, B-type, C-type & D-type ( )
(b) Three i.e A-type, B-type & C-type ( )
(c) Four types i.e A-type & B-type ( )
(d) Five types i.e A-type, B-type, C-type, D-type & E-type ( )
(e) None of the above ( )

(86) The first Technical specification for internal & External electrification was based on :-

(a) Assam PWD Technical Specification for electrical work part (internal) ( )
(b) West Bengal PWD Technical Specification for electrical work part (internal) ( )
(c) CPWD Technical Specification for electrical work part (internal) ( )
(d) CPWD Technical Specification for electrical work part (external) ( )
(e) None of the above ( )

(87) In a PVC pipe 20mm diameter, the maximum numbers of 1.5 Sqmm copper/aluminium wire can be drawn in one conduit (in straight) is :-

(a) 5 Nos ( ) (b) 10 Nos ( )
(c) 7 Nos ( ) (d) 4 Nos ( )
(e) All of the above ( )

(88) The fire retardant PVC conduit pipe to be used as per Technical specification is :-

(a) UPVC Conduit pipe ( ) (b) CPVC Conduit pipe ( )
(c) FRLSPVC Conduit pipe ( ) (d) Heavy Duty PVC Conduit pipe ( )
(e) None of the above ( )

(89) The PVC conduit pipe approved manufacturer in the first SOR are :-

(a) Plaza ( ) (b) Presto Plast ( )
(c) Vinnico ( ) (d) Prince ( )
(e) All of the above ( )

(90) The main Switch approve manufacturer in the first SOR are :-

(a) Siemens ( ) (b) Havells ( )
(c) L & T ( ) (d) None of the above ( )
(e) All of the above ( )

SECTION – B (10 Marks)

II. Attempt the question : (10x1=10)

1. In a room sizes 30 X50 Sq m, calculate the illumination requirement (DF=1.2, UF=0.7) and select the fixtures/luminaires and frame the estimate by assuming the rates required by you.