

Model Question Paper -2 with effect from 2020-21(CBCS Scheme)

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Fifth Semester B.Arch. Degree Examination Building Services - II

TIME: 03 Hours

Max. Marks: 100

- Note: 01. Answer any **FIVE** full questions, choosing at least **ONE** question from each **MODULE**.
02. Support your answer with neat sketches

Module – 1			
Q.1	(a)	Explain the importance of electrical energy in development of nation	06
	(b)	Explain the basic working principle of transformer with a neat sketch and list the different applications of transformer.	10
	(c)	Discuss any four broad features of national building code.	04
OR			
Q.2	(a)	List the advantages and disadvantages of renewable energy resources.	06
	(b)	Explain the transmission of electric power from generating station to consumer point with suitable diagram	10
	(c)	Discuss the main objects of energy conservation act 2001 of India	04
Module – 2			
Q.3	(a)	Sketch the explain service wire, energy meter board, main MCB board, sub MCB board and load connections wrt residential electrical wiring.	06
	(b)	Discuss the energy conservation opportunities in building.	06
	(c)	Give a design procedure for estimation of power required for electrical wiring a particular building.	08
OR			
Q.4	(a)	Sketch the suitable block diagram of wind energy conversion system (WECS) and explain each one in brief.	06
	(b)	Explain the construction and working of variable dome type bio gas plant with a neat diagram.	06
	(c)	Explain the electrical wiring system with a suitable diagram. i) Wood casing and capping ii) Conduit wiring	08
Module – 3			
Q.5	(a)	Explain the necessity of protective system for electrical distribution system and list the protective instruments used in electrical network.	06

	(b)	Write a short note on MCB with a neat sketch	06
	(c)	Explain the function of fuse wire used in electric circuit and discuss selection of fuse wire for particular electric load.	08
OR			
Q.6	(a)	What do you mean by earthing and explain the necessity of earthing	08
	(b)	Explain the construction and working principle of pipe earthing with a neat sketch with their parts.	12
Module – 4			
Q.7	(a)	Compare the properties of i) Incandescent lamp ii) Florescent lamp iii) LED lamp	06
	(b)	Write a short note on with neat sketch i) Incandescent lamp ii) Discharge lamp	08
	(c)	Explain in brief , the basic working principle and applications of following lighting i) Ambient lighting ii) Task lighting	06
OR			
Q.8	(a)	State and explain the illumination laws.	08
	(b)	List the factors required for good quality lighting and discuss each one in brief.	06
	(c)	Write a short note on Landscape lighting with their energy saving opportunities in electrical system.	06
Module – 5			
Q.9	(a)	Draw a single line diagram of two bed room residence and prepare the electrical layout using standard symbols. Calculate the electrical load for the lighting of the residence	20
OR			
Q.10	(a)	Draw a single line plan of a doctors clinic and prepare the electrical layout using standard symbols.	20

Table showing the Bloom's Taxonomy Level, Course Outcome and Programme Outcome				
Question	Bloom's Taxonomy Level attached		Course Outcome	Programme Outcome
Q.1	(a)	BTL2	CO1	PO1,PO6, P11,P12
	(b)	BTL2	CO1	PO1,P11, P12
	(c)	BTL2	CO1	PO1,P11,PO6,P12
Q.2	(a)	BTL1	CO1	PO1,P11,P12
	(b)	BTL2	CO1	PO1,P11,P12
	(c)	BTL2	CO1	PO1,PO6, P11,P12
Q.3	(a)	BTL2	CO2	PO1,P11,P12
	(b)	BTL2	CO2	PO1,P11,P12
	(c)	BTL3	CO2	PO1,P11,P12
Q.4	(a)	BTL2	CO2	PO1,P11,P12
	(b)	BTL2	CO2	PO1,P11,P12
	(c)	BTL3	CO2	PO1,P11,P12
Q.5	(a)	BTL2	CO3	PO1,P11,P12
	(b)	BTL2	CO3	PO1,P11,P12
	(c)	BTL4	CO3	PO1,P11,P12
Q.6	(a)	BTL2	CO3	PO1,P11,P12
	(b)	BTL2	CO3	PO1,P11,P12
	(c)	---	----	PO1,P11,P12
Q.7	(a)	BTL2	CO4	PO1,P12,P12
	(b)	BTL2	CO4	PO1,P11,P12
	(c)	BTL2	CO4	PO1,P11,P12
Q.8	(a)	BTL2	CO4	PO1,P11,P12
	(b)	BTL3	CO4	PO1,P11,P12
	(c)	BTL2	CO4	PO1,P11,P12
Q.9	(a)	BTL3, BTL5	CO5	PO3,PO4, P11,P12
	(b)	---	----	--
	(c)	---	-----	----
Q.10	(a)	BTL3, BTL5	CO5	PO3,PO4, P11,P12
	(b)	---	----	---
	(c)	---	-----	-----
Bloom's Taxonomy Levels	Lower order thinking skills			
	Remembering(knowledge): <i>L</i> ₁	Understanding Comprehension): <i>L</i> ₂	Applying (Application): <i>L</i> ₃	
	Higher order thinking skills			
	Analyzing (Analysis): <i>L</i> ₄	Valuating (Evaluation): <i>L</i> ₅	Creating (Synthesis): <i>L</i> ₆	



Model Question Paper -1 with effect from 2020-21(CBCS Scheme)

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Fifth Semester B.Arch. Degree Examination Building Services - II

TIME: 03 Hours

Max. Marks: 100

- Note: 01. Answer any **FIVE** full questions, choosing at least **ONE** question from each **MODULE**.
02. Support your answer with neat sketches

Module – 1			
Q.1	(a)	Explain the following terms i) Electric current ii) Potential difference iii) Connected load iv) Maximum Demand	06
	(b)	Explain core type and shell type transformer with suitable diagrams and list ant four applications of transformers.	10
	(c)	Discuss any four broad features of national building code.	04
OR			
Q.2	(a)	List the advantages and disadvantages of renewable energy resources.	06
	(b)	Explain the transmission of electric power from generating station to consumer point with suitable diagram	10
	(c)	Discuss the main objects and function of state electricity board.	04
Module – 2			
Q.3	(a)	Explain the following factors w.r.t electrical wiring i) Service wire ii) Energy meter iii) Main circuit breaker iv) two way switch	06
	(b)	Discuss the energy conservation opportunities in building.	06
	(c)	Give a design procedure for estimation of power required for electrical wiring a particular building.	08
OR			
Q.4	(a)	Explain the basic working principle of horizontal axis type wind power plant.	06
	(b)	Explain the construction and working of fixed dome type bio gas plant with a neat diagram.	06
	(c)	Sketch the electrical conduit wiring and discuss its merits and demerits.	08
Module – 3			
Q.5	(a)	Outline the need of protective system in electrical distribution system and list protective devices used in electrical networks	06

	(b)	Write a short note on MCB with a neat sketch	06
	(c)	Explain the function of fuse wire used in electric circuit and give comparison between fuse and MCB.	08
OR			
Q.6	(a)	What do you mean by earthing and explain the necessity of earthing	08
	(b)	Explain the construction and working principle of plate earthing with a neat sketch with their parts.	12
Module – 4			
Q.7	(a)	Outline the need of energy efficient lamps in building structure.	06
	(b)	Write a short note on with neat sketch i) Incandescent lamp ii) Fluorescent lamp	08
	(c)	Explain in brief, the basic working principle and applications of following lighting i) Ambient lighting ii) Task lighting	06
OR			
Q.8	(a)	State and explain the illumination laws.	08
	(b)	List the factors required for good quality lighting and discuss each one in brief.	06
	(c)	Write a short note on street lighting with their energy saving opportunities in electrical system.	06
Module – 5			
Q.9	(a)	Draw a single line diagram of two bed room residence and prepare the electrical layout using standard symbols. Calculate the electrical load for the lighting of the residence	20
OR			
Q.10	(a)	Draw a single line plan of a doctors clinic and prepare the electrical layout using standard symbols.	20

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	(c)	BTL2	CO1	PO1,P11,PO6,P12
Q.2	(a)	BTL1	CO1	PO1,P11,P12
	(b)	BTL2	CO1	PO1,P11,P12
	(c)	BTL2	CO1	PO1,PO6, P11,P12
Q.3	(a)	BTL2	CO2	PO1,P11,P12
	(b)	BTL2	CO2	PO1,P11,P12
	(c)	BTL3	CO2	PO1,P11,P12
Q.4	(a)	BTL2	CO2	PO1,P11,P12
	(b)	BTL2	CO2	PO1,P11,P12
	(c)	BTL3	CO2	PO1,P11,P12
Q.5	(a)	BTL2	CO3	PO1,P11,P12
	(b)	BTL2	CO3	PO1,P11,P12
	(c)	BTL4	CO3	PO1,P11,P12
Q.6	(a)	BTL2	CO3	PO1,P11,P12
	(b)	BTL2	CO3	PO1,P11,P12
	(c)	---	----	----
Q.7	(a)	BTL2	CO4	PO1,P12,P12
	(b)	BTL2	CO4	PO1,P11,P12
	(c)	BTL2	CO4	PO1,P11,P12
Q.8	(a)	BTL2	CO4	PO1,P11,P12
	(b)	BTL3	CO4	PO1,P11,P12
	(c)	BTL2	CO4	PO1,P11,P12
Q.9	(a)	BTL3, BTL5	CO5	PO3,PO4, P11,P12
	(b)	---	----	--
	(c)	---	-----	----
Q.10	(a)	BTL3, BTL5	CO5	PO3,PO4, P11,P12
	(b)	---	----	---
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Bloom's Taxonomy Levels	Lower order thinking skills			
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	Higher order thinking skills			
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