

GBCS SCHEME

18MN56

Fifth Semester B.E. Degree Examination, July/August 2021 Mine Electrical Engineering

Time: 3 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

1	a.	Describe the scope and importance of electrical engineer in mines.	(05 Marks)
	b.	With a neat diagram, explain the parts of an electric drive.	(10 Marks)
	c.	Write a note on choice of electric drive.	(05 Marks)
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2		Explain in detail the Indian electricity rules applicable to mining any ten.	(10 Marks)
2	a.	Explain in detail the indian electricity fules applicable to infining any ten.	(05 Marks)
	b.	What are the technical advantages of Electric drive?	(05 Marks)
	C.	Draw the neat sketch of winders in mines.	(03 Marks)
_		GL 10 DG	(10 Marks)
3	a.	Classify DC motors and explain in brief.	1
	b.	Explain the types of electric braking of a DC shunt motor.	(10 Marks)
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4	a.	Explain Armature and flux control method of speed control of DC shunt motor.	(10 Marks)
	b.	Derive the Emf equation of a DC Generator.	(10 Marks)
5	a.	Explain the constructional features of slip ring and squirrel cage Induction motor.	(10 Marks)
	b.	With neat sketch, explain the working principle of an alternator.	(10 Marks)
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6	a.	With their usual notions, derive the EMF equation of an alternations	(10 Marks)
	b.	Explain the methods speed control of induction motors.	(10 Marks)
7	a.	Explain the working of Air Blast circuit Breaker with a neat diagram.	(10 Marks)
	b.	Differentiate underground and surface distribution with a single line diagram.	(10 Marks)
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8	a.	List and explain types of motor enclosures in mines.	(10 Marks)
O	b.	Explain underground signaling in mines.	(10 Marks)
	υ.	Explain underground signaming in annual	
0	0	Define the following terms used in illumination	
9	a.	i) Reflectance ii) Light iii) MHSCP iv) Glare v) Lumen.	(10 Marks)
	1.	1	(10 Marks)
	b.	WITE a note on mannation design for mines.	,
		Di Libina siving the adventages over other types	(10 Marks)
10	-		(10 Marks)
	b.	State and explain the laws of illumination.	(20 2.2023)

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Important Note: 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.

2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.