Hall Tick	xet Number :													
Code: 5	G583 R-15													
IV B.Ted	ch. Il Semester Regular & Supplementary Examinations September 2020 Non Conventional Sources of Energy (Mechanical Engineering)													
Max. M Answer	· · · · · · · · · · · · · · · · · · ·													
1 a)	UNIT-I Explain any two instruments used for measuring solar radiation with neat sketches.													
b)	b) Give the significance of solar energy.													
	OR													
2 a)	Describe the role and potential of various Renewable energy sources. Explain about extraterrestrial and terrestrial solar radiation.													
b)	Explain about extraterrestrial and terrestrial solar radiation.													
3 a)	Describe the operation of a non-convective solar pond for the solar energy collection and storage.													
b)	With the aid of neat sketch explain the working of any one type of solar heating system.													
	OR													
4	Enumerate the different types of concentrating type collectors. Explain the collector used in power plant for generation of Electric energy. UNIT-III													
5	What is meant by anaerobic digestion? Explain the factors which effect Bio digestion.													
	OR													
6 a)	Explain with a neat sketch the working of a wind energy conversion system (WECS) with its main components.													
b)	Explain various types of horizontal axis type aero generators. UNIT-IV													
7 a)	Explain Binary cycle system for liquid dominated geo thermal system.													
b)	What are the advantages and disadvantages of geothermal energy forms?													
	OR													
8	Explain with neat sketches the various methods of Tidal power generation. What are the limitations of each method? UNIT-V													

OR

b) Draw a configuration of open cycle MHD generator and explain its working.

b) With the aid of a neat sketch explain a thermoelectric power generator.

9 a) Explain the basic principle of MHD power generation.

10 a) What is Seebeck thermoelectric effect?

4M

10M

4M

10M

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•	•	lved i	in pre	epara	ation	of co	al ar	nd wh	nat m	ethod	s are	availab		14M
					OR									
Draw an explanatory line diagram of an ash handling system employed in steam														
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triermai power sta	iliori.													1 4 IVI
					INIT-	-II								
What are the diffe	erent type	es of p	pulve				xplaiı	n with	neat	sketc	hes.			14M
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Explain the variou	ıs draugh	ht sys	stems	with	nea	t ske	tches	5.						14M
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Draw a layout of a	a typical	micro	hydi	L			expl	ain it	s wor	king ir	n deta	ail.		14M
					OR									
Explain the const	ruction a	nd wo	orkin	g of b	oilin	g wat	er re	actor	with	a layo	ut.			14M
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Analyze the pollut	tion from	therr	mal n				nd suc	aaest	few (contro	l mei	hods		14M
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Estimate the cost of generation per kW-hr from the following data. Capacity of the plant – 120MW														
Capital cost – Rs.1,200 per kW installed														
•				capit	tal									
•		g/kW-	hr											
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	Explain the princi for coal preparation. Draw an explanar power plants and thermal power state. What are the difference is a power plant in the various in the various in the power state. What are the difference is a power plant in the various in the various in the power state. Describe the aux disadvantages of in the power plant in the various in the power state. Draw a neat diagram working with a head in the constitution in the power plant in the plant in th	Explain the principle invo for coal preparation? Draw an explanatory line power plants and also exthermal power station. What are the different type Explain the various draugh Describe the auxiliary exdisadvantages of this plant Draw a neat diagram of a working with a help of a Table Transport of the construction and t	Power (Me. Marks: 70 Answer all five units by choosing Explain the principle involved for coal preparation? Draw an explanatory line diagrower plants and also explain thermal power station. What are the different types of Explain the various draught system Describe the auxiliary equipmedisadvantages of this plant? Draw a neat diagram of a regworking with a help of a T-S diagr	Power Plants: 5G584 Tech. Il Semester Regular & Suppower Plants: 70 Answer all five units by choosing one Explain the principle involved in prefor coal preparation? Draw an explanatory line diagram power plants and also explain the othermal power station. What are the different types of pulve Explain the various draught systems Describe the auxiliary equipments disadvantages of this plant? Draw a neat diagram of a regenera working with a help of a T-S diagram Draw a layout of a typical micro hydromatical power in the construction and working and the construction and working with a help of a T-S diagram and the construction and working and the construction and the construction and working and the construction and the constru	Power Plant (Mechanical Mechanic	Power Plant Eng (Mechanical Eng. (Mechanical Eng. (Mechanical Eng. (Mechanical Eng. (Mechanical Eng.). Marks: 70 Answer all five units by choosing one questic ************************************	Power Plant Engine (Mechanical Engine (Mechanical Engine (Mechanical Engine) Marks: 70 Answer all five units by choosing one question from the transment of the construction and working of an ash has power plants and also explain the difficulties encountermal power station. What are the different types of pulverizing mills? Engine of a diesel of disadvantages of this plant? OR Draw a neat diagram of a regenerative gas turbing working with a help of a T-S diagram. UNIT-IV Draw a layout of a typical micro hydro scheme and or	Power Plant Engineering (Mechanical Engineering (Mitt-II) Explain the principle involved in preparation of coal ar for coal preparation? OR Draw an explanatory line diagram of an ash handlir power plants and also explain the difficulties encounte thermal power station. UNIT-II Describe the different types of pulverizing mills? Explain OR Explain the various draught systems with neat sketches UNIT-III Describe the auxiliary equipments of a diesel engin disadvantages of this plant? OR Draw a neat diagram of a regenerative gas turbine wi working with a help of a T-S diagram. UNIT-IV Draw a layout of a typical micro hydro scheme and expl OR Explain the construction and working of boiling water re UNIT-V Analyze the pollution from thermal power plants and sugon OR Estimate the cost of generation per kW-hr from the fill plant - 120MW Capital cost - Rs.1,200 per kW installed Interest and depreciation - 10 % on capital Fuel consumption - 1.2 kg/kW-hr Fuel cost - Rs. 40 / ton Salaries, wages, repairs and maintenance - 6, 00,000/s The maximum demand is 80 MW and load factor is 40 sections.	Power Plant Engineering (Mechanical Engineering) (Multi-II) Explain the principle involved in preparation of coal and where the difficulties in the principle involved in preparation of an ash handling sy power plants and also explain the difficulties encountered in thermal power station. UNIT-II What are the different types of pulverizing mills? Explain with OR Explain the various draught systems with neat sketches. UNIT-III Describe the auxiliary equipments of a diesel engine podisadvantages of this plant? OR Draw a neat diagram of a regenerative gas turbine with reworking with a help of a T-S diagram. UNIT-IV Draw a layout of a typical micro hydro scheme and explain its OR Explain the construction and working of boiling water reactor UNIT-V Analyze the pollution from thermal power plants and suggest OR Estimate the cost of generation per kW-hr from the follow plant – 120MW Capital cost – Rs. 1,200 per kW installed Interest and depreciation – 10 % on capital Fuel consumption – 1.2 kg/kW-hr Fuel cost – Rs. 40 / ton Salaries, wages, repairs and maintenance – 6, 00,000/year The maximum demand is 80 MW and load factor is 40 %.	Power Plant Engineering (Mechanical Engineering) (Mitt-II) Explain the principle involved in preparation of coal and what m for coal preparation? OR Draw an explanatory line diagram of an ash handling system power plants and also explain the difficulties encountered in the thermal power station. UNIT-II) What are the different types of pulverizing mills? Explain with neat OR Explain the various draught systems with neat sketches. UNIT-III Describe the auxiliary equipments of a diesel engine power disadvantages of this plant? OR Draw a neat diagram of a regenerative gas turbine with reheate working with a help of a T-S diagram. UNIT-IV Draw a layout of a typical micro hydro scheme and explain its wor OR Explain the construction and working of boiling water reactor with UNIT-V Analyze the pollution from thermal power plants and suggest few or OR Estimate the cost of generation per kW-hr from the following of plant – 120MW Capital cost – Rs. 1,200 per kW installed Interest and depreciation – 10 % on capital Fuel consumption – 1.2 kg/kW-hr Fuel cost – Rs. 40 / ton Salaries, wages, repairs and maintenance – 6, 00,000/year The maximum demand is 80 MW and load factor is 40 %.	E: 5G584 Tech. Il Semester Regular & Supplementary Examinations Serenator Plant Engineering (Mechanical Engineering) (Mitt—III Explain the principle involved in preparation of coal and what method for coal preparation? OR Draw an explanatory line diagram of an ash handling system emplower plants and also explain the difficulties encountered in the handle thermal power station. UNIT—III Describe the different types of pulverizing mills? Explain with neat sketches. UNIT—III Describe the auxiliary equipments of a diesel engine power plant. disadvantages of this plant? OR Draw a neat diagram of a regenerative gas turbine with reheater and working with a help of a T-S diagram. UNIT—IV Draw a layout of a typical micro hydro scheme and explain its working in OR Explain the construction and working of boiling water reactor with a layound of the pollution from thermal power plants and suggest few controfor OR Estimate the cost of generation per kW-hr from the following data. Or plant—120MW Capital cost—Rs.1,200 per kW installed Interest and depreciation—10% on capital Fuel consumption—1.2 kg/kW-hr Fuel cost—Rs. 40/ ton Salaries, wages, repairs and maintenance—6, 00,000/year The maximum demand is 80 MW and load factor is 40 %.	E: 5G584 Tech. II Semester Regular & Supplementary Examinations Septer Power Plant Engineering (Mechanical Engineering) (Mechanical Engineering) (Manswer all five units by choosing one question from each unit (5 x 14 = 70	E: 5G584 Tech. II Semester Regular & Supplementary Examinations September 2 Power Plant Engineering (Mechanical Engineering) (Mechanical Engineering) Marks: 70 Ime: 3 H Answer all five units by choosing one question from each unit (5 x 14 = 70 Marks	R-15 Significant Regular & Supplementary Examinations September 2020 Power Plant Engineering (Mechanical Engineering) (Mechanics) (Mechanical Engineering) (Mechanical En

	Hall	Ticket Number :													
_	Cod	de: 5G68A		ı	I				ı	ı	I			R-15	
	IV E	3.Tech. II Semest	er R	egu	lar 8	. Sup	ople	mer	ntary	/ Exc	amir	natio	ns Sept	ember 2020	
	Disaster Management														
	(Common to EEE & ME)														
Max. Marks: 70 Time: 3 Hours Answer all five units by choosing one question from each unit ($5 \times 14 = 70$ Marks)															

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1.	a)	a) Degree of Vulnerability depends on the type of Hazard and Coping Capacity. Explain the statement with neat and suitable flow chart.											7M		
	b)	·												7M	
2	OR 2. a) Discuss about the statement 'Disasters occurs when Hazard meets the Vulnerability' with														
۷.	a)	the help of any flow chart.											nerability with	10M	
	b)													4M	
	UNIT-II														
3.	,	Classify landslides													5M
	b)	Explain causes of one Define ecological for the Explain causes of	•												5M 4M
	c)	Define ecological n	ayılı	ly all	u quc	ne e	каптр	OR							4111
4.	a)	Define Soil erosion	and	write	the	ways	to co	ontro	l soil	erosi	on				4M
	b)	Explain the causes	of V	olcar	noes	and o	discu	ss ab	out t	heir I	ocati	ons ir	n India an	id worldwide.	5M
	c)	Discuss about the urban flooding.	urb	an fl	oodir	ıg, it	s vai	ious	caus	ses a	and r	emed	dial meas	sures to avoid	5M
		urbarr nooding.					U	NIT-	III						Olvi
5.	a)	Discuss the ecolo	_	, soc	ial, e	conc	mica	l imp	pacts	due	to c	yclor	nes and	drought taking	
	1- \	suitable examples.				.l	-1°	. 1							10M
	b)	Define and write th	e rea	isons	oru	rban	aisas	OR							4M
6.	a)	Discuss the demo	grap	hic a	ınd p	sych	o-so		mpac	ts d	ue to	war	situation	between two	
	countries taking any suitable example.									4M					
	b)	Discuss the global										and it	o imposto		5M
	c)) Define Climate change, explain the causes of climate change and its impacts. UNIT-IV											5M		
7.		Discuss in detail a	bout	the '	Disas	ster r				ycle	and	its ph	nases wit	h suitable flow	
		chart.						OR							14M
8.	a)	Enlist the post disa	ster	envir	onme	ental	respo	_	activ	ities	and e	explai	n anv fou	ır of them.	8M
	b)	Discuss the roles a					•					•	•		
		in DRR.													6M
9.	a)	Describe the natur	al an	d ma	nma	de ca		NIT-		മേ റി	hand	ac in	Vour eurr	rounding areas	
٥.	a)	taking any suitable				ue ca	uses	01 10	aria u	3 0 0	larig	C3 III	your surr	ounding areas	6M
	b)	Discuss the sustain	nable	deve	elopn	nenta	ıl me	thods	to c	omba	at clir	nate (change g	lobally.	4M
	 c) Define vulnerability and discuss how industrialization effects vulnerability of the surrounding areas. 											4M			
	OR												TIVI		
10.	a)	Discuss any one of immediate and long					ect th	at yo	ou lik	e me	entior	ning t	he cause	es of it and its	6M
	b)	Discuss the positiv	e and	d neg	ative	impa		due to	o dar	n cor	nstrud	ction (on both si	ides of dam.	8M