

**ANSWER KEY**

1.	(B)	2.	(52.32)
3.	(D)	4.	1bar, 300K, 18.38bar, 689.22 K, 73.937bar, 2772.55K, 4.023 bar, 1206.82K 56.47%, 847.05KJ/ Kg
5.	(C)	6.	1.58kg/hr 0.3kg/kWhr
7.	3.36%, 0.78%	8.	(B)
9.	49.12% 45251KW	10.	1253.43K, 40%
11.	31%	12.	55
13.	0.369Kg / sec	14.	2421.42KW, 728.91KW, 1.392KW/K
15.	11.313, 42.14%	16.	47.4%
17.	7.786, 68, 692.36 kJ/kg 1.769 MPa, 756.78K 4.8 MPa	18.	5.656, 2.64 MPa, 2872 kJ/kg, 50%, 7.456, 1.665 MPa, 446.45 kJ/kg, 60.8%
19.	27.7%, 53.7 kJ/kg, 32.2%	20.	805 K, 29.2p <sub>1</sub> , 1490K , 2410K , 1200K, , 0.67
21.	259.4 kJ/kg, 351.68 kJ/kg, 569.43 kJ/kg, 16.2%, 723K	22.	30.4%, 4272 kW, 115
23.	51.5%, 3.45	24.	$(W_{net})_{max} = c_p (\sqrt{T_{max}} - \sqrt{T_{min}})^2$ $(\eta_{cycle})_{max} = 1 - \sqrt{\frac{T_{min}}{T_{max}}}$ , $(r_p)_{opt} = 9.14$ , $(W_{net})_{max} = 236.79kJ / kg$ , $\eta_{cycle} = 0.469$
25.	1251.4K, 40%	26.	0.562 kg/s, 0.432, 523.2 K