Jahangirnagar University

Department/Institute: Information Technology

Masters/Honours 1st **year Final Examination-2019**

Course No.# ICT-1202

Course Title# Electronic Devices and Circuits Lab

Examination Roll No. #	19 23 40
Registration No. #	2019365 0283
Academic Session #	**2018- 2019**

Total no of written pages in the script #

Date: , 2021 , July, 13

Instructions:

1. Examinee must write his/her exam roll no. and page no. at the top of every page of the script.
2. Do not write your name or any identification mark anywhere of the script.
3. Total time for exam is 45 minutes. You will get 15 additional minutes for submission.
4. Delay in submission is not acceptable.
5. You have to submit your exam script in PDF format.
6. The examinee must submit the examination script **through online (Google classroom/email/google form etc.)** as prescribed by the examiner.
7. You must use **your EXAM ID** only for naming your submitted file.
8. After completing the exam, you must write the total number of pages used for the exam in the top sheet.

2021/7/13 13:02

Exam Roll – 19 23 40
Class Roll – 2023

Answer to the question no–1

Circuit Diagram:

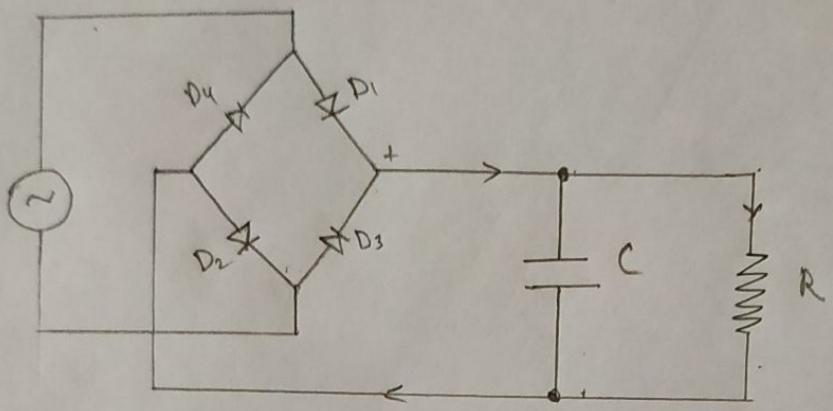


fig: Full-wave bridge rectifier with capacitive filter.

Ripple factor is 0.2

formula:

$$V_{ripple} = \frac{I_{Load}}{f \times c}$$

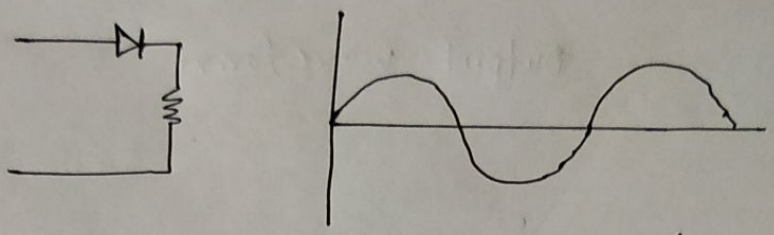
load rassitance = 22 Ω

capacitor $C = \frac{It}{\Delta V}$

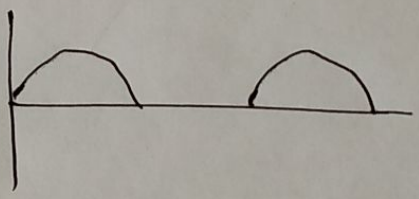
$$= \frac{100 \times 0.01}{0.2}$$

= 5 F

For a half wave rectifier this is what we have observe

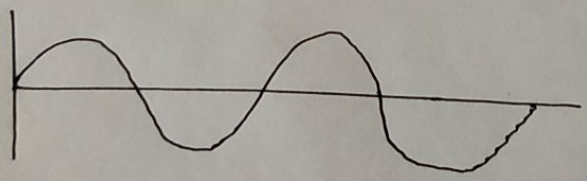


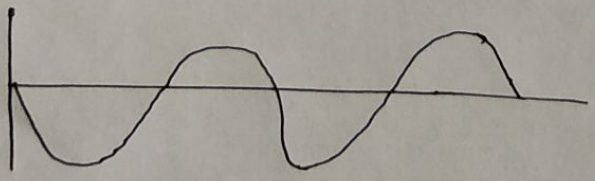
input waveforms



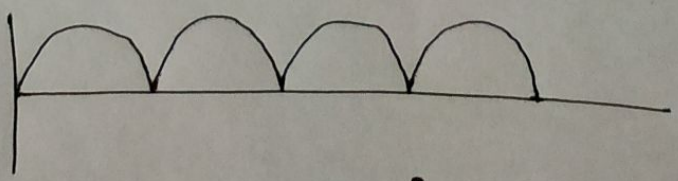
output waveforms

Full wave Rectifier - waveforms



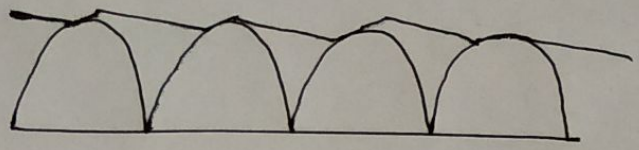


input waveforms



Output waveforms

Ripple:



Output waveform