

45 Lecture - PHY301

Important Mcqs

What is the rectification factor for a full wave bridge rectifier?

- a) 0.5
- b) 0.637
- c) 0.812
- d) 1

Answer: c) 0.812

How many diodes are used in a full wave bridge rectifier?

- a) 1
- b) 2
- c) 3
- d) 4**

Answer: d) 4

What is the advantage of a full wave bridge rectifier over a half wave rectifier?

- a) It requires fewer diodes
- b) It provides a higher DC voltage output
- c) It is less complex
- d) It is more efficient

Answer: b) It provides a higher DC voltage output

What is the purpose of the smoothing capacitor in a full wave bridge rectifier?

- a) To reduce the ripple in the DC output
- b) To increase the voltage of the AC input

c) To convert AC voltage to DC voltage

d) To provide a constant voltage output

Answer: a) To reduce the ripple in the DC output

What is the efficiency of a full wave bridge rectifier?

a) 25%

b) 50%

c) 75%

d) 81.2%

Answer: d) 81.2%

What is the RMS voltage of the AC input in a full wave bridge rectifier?

a) Peak voltage

b) Peak-to-peak voltage

c) Zero voltage

d) Peak voltage divided by the square root of 2

Answer: d) Peak voltage divided by the square root of 2

Which configuration of diodes is used in a full wave bridge rectifier?

a) Center-tap

b) Half wave

c) Full wave

d) Bridge

Answer: d) Bridge

What is the output voltage of a full wave bridge rectifier with an input voltage of 12V RMS?

a) 6.12V DC

b) 7.32V DC

c) 9.75V DC

d) 12V DC

Answer: c) 9.75V DC (calculated as 12V RMS x 0.812)

What is the disadvantage of a full wave bridge rectifier?

- a) It is less efficient than a half wave rectifier
- b) It requires more diodes than a half wave rectifier
- c) It produces a lower DC output voltage than a half wave rectifier
- d) It is more complex than a half wave rectifier

Answer: b) It requires more diodes than a half wave rectifier

What is the rectification efficiency of a full wave bridge rectifier?

- a) 50%
- b) 75%
- c) 81.2%
- d) 100%**

Answer: c) 81.2%