Dear Aspirants,

This is step-by-step user guide for **QUALEXE**…!

We understand that you are practicing hard for your Exam Preparation.

QUALEXE is a strategically crafted tool to crack different Government Exams.

At **QUALEXE,** we offer,

- **MCQs** – For Subject specific Practice.
- **Papers** – Pervious year papers for different government exams.
- **Exams** – All relevant information for different exams.
- **Quiz** – Weekly Quizzes for regular practice.
- **Tournament** – Compete with other aspirants and win exciting prizes.
- **Test Series** – Witness the Exam giving experience with Exam specific tests

Login / Signup with your Email ID and explore **QUALEXE** features for Free…!

Trending - Get all latest updates regarding Quiz, Tournament and Test Series

Latest Updates – Get latest updates regarding different Govt. Exam notifications

Latest Updates – Get latest updates regarding different Govt. Exam notifications

MCQ

Numerous **MCQs** available for Subject wise Preparation

Many More new **Subjects** to come...

MCQ

BASIC ELECTRONICS

BASIC ELECTRONICS

- CONTROL SYSTEM ENGINEERING
- DIGITAL ELECTRONICS
- ELECTRICAL CIRCUIT ANALYSIS
- ELECTRICAL ENERGY CONSERVATION AND AUDITING
- ELECTRICAL ENGINEERING MATERIALS
- ELECTRICAL MACHINES
- ELECTRICAL WIRING
- ELECTROMAGNETICS
- MEASUREMENT & INSTRUMENTATION
- MICROPROCESSOR AND MICROCONTROLLER INTERFACING
- POWER ELECTRONICS & DRIVES
- POWER SYSTEM
- SIGNALS & SYSTEMS
- UTILIZATION OF ELECTRICAL ENERGY

Q1. The change in collector emitter voltage from 6V to 9V causes increase in collector current from 6mA to 6.3mA. Determine the dynamic output resistance.

- ○ 20kΩ
- ○ 10kΩ
- ○ 60kΩ
- ○ 50kΩ

[Show Answer] [Solution]

Given Data :

$$\Delta V_{CE} = 9 - 6 = 3\,V$$
$$\Delta I_C = 6.3\,m - 6\,m = 0.3\,mA$$

Now, dynamic output resistance,

$$R_O = \frac{\Delta V_{CE}}{\Delta I_C} = \frac{3}{0.3\,m} = 10\,k\Omega$$

Q2. Negative feedback in an amplifier results in

- ○ more gain, more bandwidth
- ○ more gain, less bandwidth
- ○ less gain, more bandwidth
- ○ less gain, less bandwidth

[Show Answer] [Solution]

Detailed **Solution** for better understanding

View **Solution** and **Correct Answer**

Papers

Qualexe MCQ **Papers** ▾ Exam Quiz Tournament Test Series

Previous Years Papers

GEB —

GSECL —

Exam wise **Previous Year Papers** with correct answers

VIDYUT SAHAYAK (JUNIOR ENGINEER-ELECTRICAL)   VIDYUT SAHAYAK (PLANT ATTENDANT GR. I)

👁 GSECL VSJE 2020 #Shift 1   👁 GSECL VSJE 2020 #Shift 2

We have everyday content for you

QUIZ
Read every day, test it here

TOURNAMENT
Participate, Compete, Win...

TEST SERIES
Strategically Designed Mock test for competitive Exams

MCQ
Check Your Expertise in each Subject

Result
Analyse your strengths and weaknesses

Qualexe

Exam

Qualexe   MCQ   Papers ▾   Exam   Quiz   Tournament   Test Series

Exam

ACPC

GEB

GEB

GIDC

GPSC

GSRTC

GSSSB

MC

GEB

DGVCL	›
GETCO	›
GSECL (LIVE)	›
MGVCL	›
PGVCL	›
UGVCL	›

For **Different Examination Bodies** – Get Latest Exam Notifications, Exam Specific Test Series, Tournaments, Quizzes and many more…

Qualexe

MCQ   Papers ▾   Exam   **Quiz**   Tournament   Test Series

Quiz

Weekly Quiz – Every week total 5 Quizzes are available to user for Practice.

Year 2022

July Week # 1 — Expire on 01 Aug 2022 +

July Week # 2 — Expire on 08 Aug 2022 +

July Week # 3 — Expire on 15 Aug 2022 +

July Week # 4 — Expire on 22 Aug 2022 —

Quiz wise User Attemption

Quiz 1 — Attempted

Quiz 2 — Get Started →

Quiz 3 — Get Started →

Quiz 4 — Get Started →

Quiz 5 — Get Started →

FAQs

July
Week # 4 Quiz 1

Q1. The fully controlled thyristor converter in the figure is fed from a single-phase source. When the firing angle is 0°, the DC output voltage of the converter is 300 V. What will be the output voltage for a firing angle of 60°, assuming continuous conduction?

✗ ◉ 300
✓ ○ 150
○ 200
○ 700
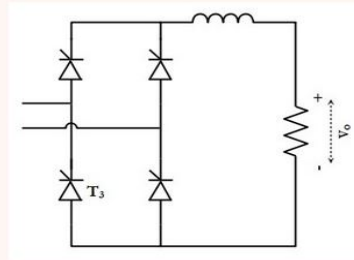
Your Answer and **Correct Answer**

Qualexe

MCQ   Papers ▾   Exam   Quiz   **Tournament**   Test Series

Login/Sign Up

Tournament

Monthly Tournaments
Mark its Start and End date in your Calendar.

Tournament Round #1
🕐 Start Date: 1 July 2022   🕐 End Date: 31 July 2022

Start Now

Tournament
Round #1 and Round #2

Tournament Round #2
🕐 Start Date: 16 July 2022   🕐 End Date: 31 July 2022

Start Now

RESULTS

Results will be declared on...
Last day of each month at 11:59:59 pm

Winner will get Exciting Gift

Winners
Every month Top 3 rankers of Tournament will get Gift from
QUALEXE

Tournament FAQs

Test Series

Qualexe
MCQ | Papers ▾ | Exam | Quiz | Tournament | Test Series

Test Series

Exam Specific Test Series

GSECL (VIDYUT SAHAYAK (PLANT ATTENDANT GR. I)) Expire on 31 July 2022 +

GSECL (VIDYUT SAHAYAK (JUNIOR ENGINEER-ELECTRICAL)) Expire on 31 July 2022 −

Launching offer
Hurry-Up - Attend 5 Test Series In Just ₹ 0 ₹ 199 Only.

Test Series 1 - VSJE
🕐 100 Questions 📄 100 Marks 🕐 120 Mins
Attempted
[Detailed Solution]
[Performance]

Test Series 2 - VSJE
🕐 100 Questions 📄 100 Marks 🕐 120 Mins
Attempted
[Detailed Solution]
[Performance]

Test Series 3 - VSJE
🕐 100 Questions 📄 100 Marks 🕐 120 Mins
Attempted
[Detailed Solution]
[Performance]

Test Series 4 VSJE
🕐 100 Questions 📄 100 Marks 🕐 120 Mins
Attempted
[Detailed Solution]
[Performance]

Test Series 5 VSJE
🕐 100 Questions 📄 100 Marks 🕐 120 Mins
[Start Now]

We have everyday content for you

QUIZ
Read every day, test it here

TOURNAMENT
Participate, Compete, Win...

TEST SERIES
Strategically Designed Mock test for competitive Exams

MCQ
Check Your Expertise in each Subject

Result
Analyse your strengths and weaknesses

Qualexe

Test Series Detailed Solution

Performance Analysis for Each User

Dear Aspirants,

Have you visited **My Profile** section on *QUALEXE*…!

It is the Best feature of **QUALEXE** and a powerful tool for Detailed and Subject wise Performance analysis, which will help to achieve your **Targeted Score.**

All Features of **My Profile** Section is freely available to all Registered Users.

At **QUALEXE** – In **My Profile** section, you can explore,

- **Dashboard** – To access different examination modules.
- **Score Board** – For Individual Score for all attempted Quizzes, Tournaments and Test Series.
- **Personal Details** – User's details.
- **Subject Wise Statistics** – For Subject Wise Performance Analysis of user in different exam modules.
- **Leader board** – Compare your Test Series scores with other users and get your performance rank.
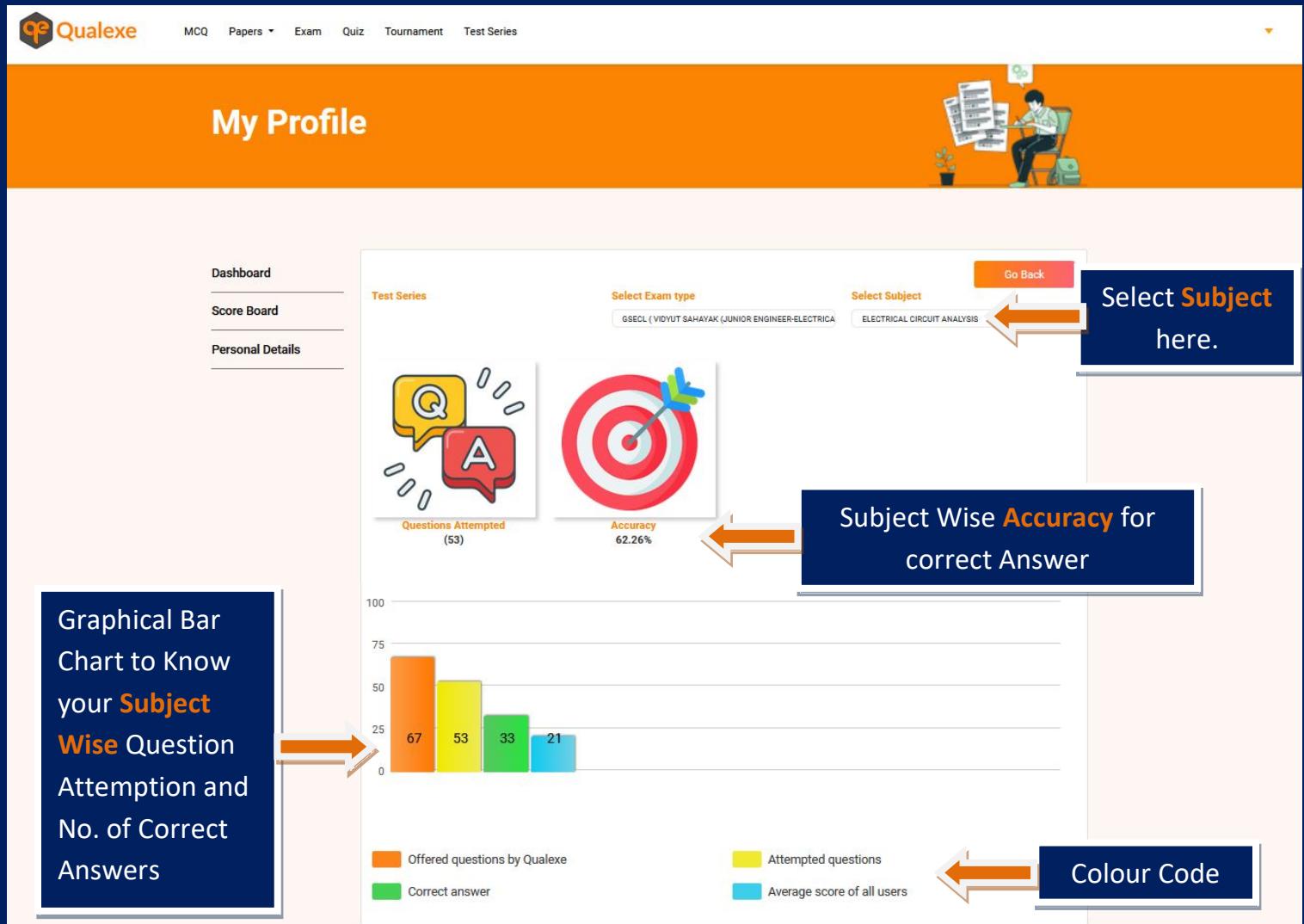- **Performance Summary** – Comparative Performance Analysis for Test Series with Rank, Accuracy and Score.

My Profile

All **My Profile** features are accessible from here.

Subject Wise Statistics for Various **Exam Modules** along with **Overall Performance**

(1) Subject Wise Statistics for Test Series

Qualexe
MCQ   Papers ▾   Exam   Quiz   Tournament   Test Series

My Profile

Dashboard

Score Board

Personal Details

Test Series

Select Exam type
GSECL (VIDYUT SAHAYAK (JUNIOR ENGINEER-ELECTRICA

Select Subject
ELECTRICAL CIRCUIT ANALYSIS

Go Back

Select **Subject** here.

Questions Attempted (53)

Accuracy 62.26%

Subject Wise **Accuracy** for correct Answer

Graphical Bar Chart to Know your **Subject Wise** Question Attemption and No. of Correct Answers

67   53   33   21

Offered questions by Qualexe

Correct answer

Attempted questions

Average score of all users

Colour Code

Such Subject Wise Statistics are also available for **Quiz, Tournament** and **Overall**.

(2) Score Board for Test Series

Qualexe   MCQ   Papers ▾   Exam   Quiz   Tournament   Test Series

My Profile

Dashboard

Score Board

Personal Details

Weekly Quiz   +

Tournament Quiz   +

Test Series Quiz   —

Test Series

Quiz		Score
GSECL (VIDYUT SAHAYAK (JUNIOR ENGINEER-ELECTRICAL))		— 🕒 Leader Board
Test Series 1 - VSJE Detailed Solution	Score: 52.5 / 100 Performance	
Test Series 2 - VSJE Detailed Solution	Score: 45 / 100 Performance	
Test Series 3 - VSJE Detailed Solution	Score: 46.25 / 100 Performance	
Test Series 4 VSJE Detailed Solution	Score: 31.25 / 100 Performance	
All test series - Overall score	Score: 175 / 400 Performance	
GSECL (VIDYUT SAHAYAK (PLANT ATTENDANT GR. I))		+ 🕒 Leader Board

Detailed Solution and **Performance Summary** for Individual Tests

Leader Board to compare your Rank with other Users

Score for Individual Tests

Such Score Board is available for **Quiz** and **Tournament** also.

Visit our Website: www.qualexe.com

(3) Detailed Solution for Test Series

Correct Answer and your Answer

Test Series 1 - VSJE

Q1. When the rotor of a 3-phase induction motor is completely blocked, the slip is equal to_____.

- ○ 0
- ✗ ○ 0.3
- ○ 0.5
- ✓ ○ 1

Solution

For blocked rotor put $N_r = 0$ in $s = \frac{N_s - N_r}{N_s} \implies s = 1$

Q2. A 50 W electric light bulb is connected to a 200 V supply. Determine (a) the current flowing in the bulb and (b) the resistance of the bulb.

- ○ 0.5 A and 400 Ω
- ✓ ○ 0.25 A and 800 Ω
- ○ 0.5 A and 800 Ω
- ○ 0.25 A and 400 Ω

Solution

Given data :

$P = 50\,W,\ V = 200\,V$

Bulb resistance $R = \frac{V^2}{P} = \frac{(200)^2}{50} = 800\,\Omega$

Current flowing in the bulb $I = \frac{V}{R} = \frac{200}{800} = 0.25\,A$

Detailed Solution for better understanding

Q3. Fig. shows the single-line diagram of a power system. The % reactance value of the 11kV generators is calculated by taking their ratings as base values. Calculate the short-circuit MVA if a 3-phase fault occurs at the beginning of the feeder. Choose base MVA as 20 MVA.
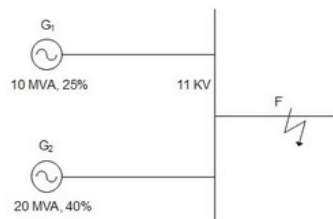
- ○ 130 MVA
- ✗ ○ 45 MVA
- ○ 180 MVA
- ✓ ○ 90 MVA

Solution

⇒ System base − $20MVA$

Reactance for Generator 1, $G_1 = j0.25 \times \frac{20}{10} = j0.5\,pu$
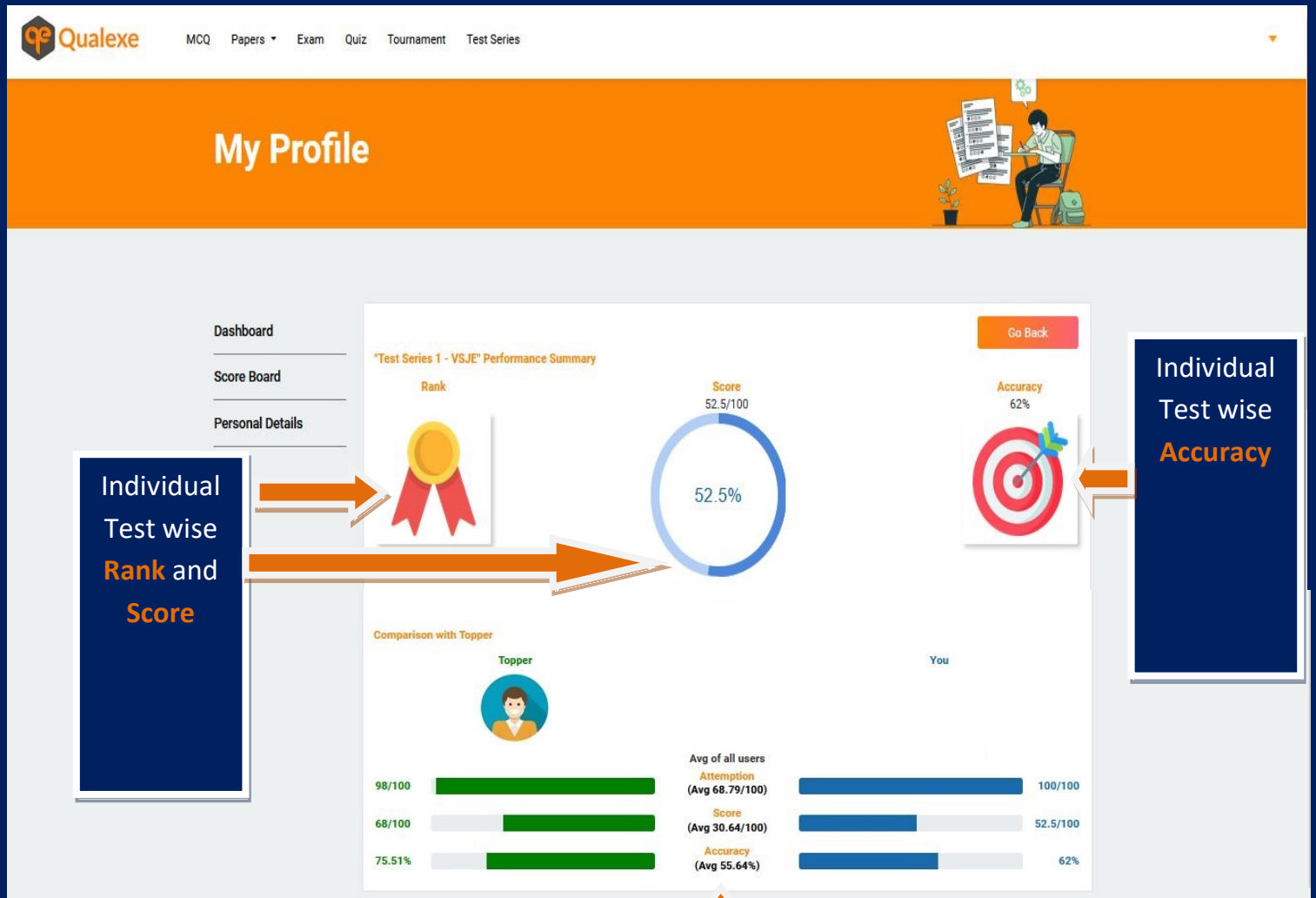
Reactance for Generator 2, $G_2 = j0.40 \times \frac{20}{20} = j0.4\,pu$

⇒ These two Generators are connected in parallels,

$\implies$ Resultant Reactance $X = j0.5 \parallel j0.4 = j0.22\,pu$

$\therefore MVA_{sc} = \frac{MVA_{base}}{X} = \frac{20}{0.22} = 90.90\,MVA$

(4) Performance Summary for Test Series

Individual Test wise **Rank** and **Score**

Individual Test wise **Accuracy**

Your **Comparative Analysis** with Topper will help you to focus on **Target Score**