To,
The Principal
SSES Amt's Science College,
Congress Nagar, Nagpur-12

Subject: For permission to conduct the add on courses in Geology during the session 2023-2024

Respected Sir,

This is to request you that, the teachers of Geology department have prepared the syllabus and modules of the 30 hours certificate courses for the session 2023-2024.

The details of the course module, syllabus and time table is submitted here with.

Hence please permit to run the add on courses and oblige me.

Thanking you

Yours sincerely

HEAD
Department of Geology
S. S. E. S. Amravati's
Science College, Nagpur.

Permitted

Shri Shivaji Education Society Amravati's

Science College, Congress Nagar, Nagpur

2023-2024

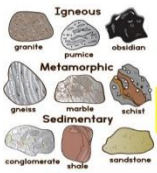
Notice

All the students of B.Sc. Geology are hereby informed that to register their names for the certificate course on "**Advanced Petrology" in the first week of April 2024.** All Geology UG students can register for this course in the Geology Department lab contact to the course coordinator **Mr. Mahesh D. Phalke**. The classes will start immediately after the registration is done. All Students must register their names.

Venue: Department of Geology Lab, SSESA's Science College, Congress Nagar, Nagpur

Mr Mahesh D. Phalke

Coordinator & Head



Course Objectives:

- To Understand basic petrology.
  To understand the basic concept of rocks.
  To understand Various types of rocks.
  To understand the interrelationship between different rocks and minerals.
  To Identify different minerals in hand specimens.
  To Identify different rocks in hand specimens.
  To identify physical properties of minerals and rocks in hand specimens and in under the microscope.

Department of Geology

Only Geology Students

CERTIFICATE COURSE IN ADVANCED PETROLOGY

- Duration: 30 Hours (10 Weeks)
- Registration: Early birds will be admitted

Registration Date: 01/04/2024 Onwards
Coordinator: Mr. Mahesh D. Phalke (HOD, Geology)

An advanced petrology course mainly focuses on the in-hand and on-field experience of different minerals and rocks exposed in the field, providing students with a comprehensive understanding of the physical properties of the rocks. This course integrates the fundamental knowledge of the mainly three types of rocks studied under the branch of petrology. It prepares students for careers in geoscience, research and geoscience-related fields. Petrology is very important to know the status of the area in order to know the soil type, groundwater conditions, drainage, crop patterns etc. in order to perform different work.

Mr Mahesh D. Phalke
Coordinator & Head

SSES AMRAVATI'S SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR-12

DEPARTMENT OF GEOLOGY

COURSE MODULE AND SYLLABUS

Course Title: Certificate Course in Advanced Petrology

Course Coordinator: Mr. Mahesh D. Phalke

Course Description:

An advanced petrology course mainly focuses on the in-hand and on-field experience of different minerals and rocks exposed in the field, providing students with a comprehensive understanding of the physical properties of the rocks. This course integrates the fundamental knowledge of the mainly three types of rocks studied under the branch of petrology. It prepares students for careers in geoscience, research and geoscience-related fields. Petrology is very important to know the status of the area to know the soil type, groundwater conditions, drainage, crop patterns etc. in order to perform different work. Rocks and Minerals may change between igneous, sedimentary and metamorphic. Petrology is important because it tells about earth history. It is key to the discovery and development of mineral resources and fundamental principles and lessons learned from petrology have application in modern industry. Identify and describe various physical properties of megascopic specimens and optical properties of minerals and rocks under a microscope. Compare various crystals based on symmetry, and symmetry functions and explain crystal systems, and mineral groups based on physical and optical properties. Outline the application of different micro-analytical tools used in mineral analysis and rock identification. Categorize industrial applications and economic importance of various minerals and rocks. Justify selection of microanalytical technique selected for the mineral and rock analysis. 6) Prepare a report on a rocks and mineral sample by performing the necessary tests and suggesting its applications in various fields. Understand fundamental concepts, principles and processes of rock-forming mineral processes and its linkage with related disciplinary areas/subjects. Demonstrate an understanding of a wide range of rock-forming minerals. Undertake the chemical compositions of various minerals, and rocks, categorized as silicate mineral types and types of rocks.

Course Objectives:

- **To Understand basic petrology.**
- **To understand the basic concept of rocks.**
- **To understand Various types of rocks.**
- **To understand the interrelationship between different rocks and minerals.**
- **To Identify different minerals in hand specimens.**
- **To Identify different rocks in hand specimens.**
- **To identify physical properties of minerals and rocks in hand specimens and in under the microscope.**

Instructional Strategies: Theory class, Practical, Samples etc.

Evaluation Strategies: Oral discussions and Final MCQ examination.

Course outline: (Relevance)

1) Petrology and its relation to other sciences.
2) Importance of rocks and minerals.
3)Identification of different rocks and minerals.
4) Scope of petrology in geosciences.
5) Classify different rocks based on various methods.
6) Three major types of rock classification.
7) Main goals of rock identification in the field.
8) Main objectives of petrology in geosciences.
9) Common problems of rock identification in the field.
10) New challenges of identifying rocks when it's weathered.
11) Physical properties of rocks and minerals.

Course Outcomes (COS):

1. Identify and describe various physical properties of megascopic specimens and optical properties of minerals and rocks under a microscope.
2. Identify and describe various physical properties of megascopic specimens and optical properties of minerals and rocks in hand specimens.
3. Outline the application of different micro-analytical tools used in rocks and mineral analysis.
4. Categorize industrial applications and economic importance of various rocks and minerals.
5. Justify the selection of technique selected for the mineral and rock analysis.
6. Prepare a report on a rock and mineral sample by performing the necessary tests and suggesting its applications in various fields.

Duration of course: Ten weeks (30 Hours)

The Structure of the Syllabus and system of evaluation-

Course	Theory Papers and Practicals	Total marks	
		Theory	Practical
Certificate Course in Advanced Petrology	Theory paper-Advanced Petrology * Theory examination will be of MCQ pattern having 60 or 80 questions each with equal marks.	**80**	**20**
	*Practical examination will be based on performance evaluation in the laboratory.	**100**	

M.D. phalke
Course Coordinator

Internal Quality Assurance Cell
(IQAC)
S. S. E. S. A. Science College
Congress Nagar, Nagpur.

Principal
S. S. E. S. Amravati's
Science College, Nagpur.

Certificate Course (10 weeks)

Advanced Petrology

Theory:

UNIT – I

Study of the minerals and rocks in hand specimens.

Petrology and its relation with other geosciences

Mineral Groups

Types of Rocks

Significance

Occurrence

Distribution

UNIT-II

Igneous Petrology

Types of Igneous rocks

Texture and Structure

Classification

UNIT- III

Sedimentary Petrology

Types of Sedimentary rocks

Texture and Structure

Occurrence & Significance

Classification

Metamorphic Petrology

Types of rocks

Texture and Structure

Classification

Practicals:

A) Study of physical properties in hand specimens of the minerals in the field.
B) Study of physical properties in hand specimens of the rocks in the field.
C) Study of optical properties of minerals under the microscope.
D) Study of optical properties of rocks under the microscope.

Distribution of marks:

1. Primary aids: - 05
2. Identification of Minerals: - 05
3. Identification of Rocks: - 05
4. Identification under the Microscope: - 05
5.

Mr Mahesh D. Phalke

Coordinator & Head

Week-wise teaching plan: -

Week	Hours	Syllabus
W-1	1	Introduction of petrology
	1	Types of rocks
	1	Introduction of minerals
W-2	1	Study of minerals in hand specimens
	2	Study of rocks in hand specimens
W-3	1	Study of mineral groups
	2	Identification of minerals
W-4	1	Study of Igneous rocks
	1	Classification of Igneous rocks
W-5	2	Texture and structure study of minerals and rocks
	1	Identification of texture and structure
W-6	2	Study of sedimentary rocks and their classification
W-7	1	Texture and structure of Sedimentary rocks and their classification
W-8	2	Study of Metamorphic rocks
	1	Texture and structure of metamorphic rocks
W-9	2	Occurrence and distribution of three rock types and minerals
	1	Classification of metamorphic rocks
W-10	2	Study of optical properties of all three types of rocks under the microscope
	1	Study of optical properties of minerals under the microscope

Mr Mahesh D. Phalke

Coordinator & Head

SSES AMRAVATI'S SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR-12

DEPARTMENT OF GEOLOGY

CERTIFICATE COURSE IN ADVANCED PETROLOGY

Time Table

Day	Theory
Friday	(B9) Theory 4:00 PM – 5:00 PM
Saturday	(Geology Lab) Practical 4:00 PM – 5:00 PM
	(B9) Theory 5:00 PM – 6:00 PM

Mr Mahesh D. Phalke

Coordinator & Head

SSES AMRAVATI'S SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR-12

DEPARTMENT OF GEOLOGY

CERTIFICATE COURSE IN ADVANCED PETROLOGY

List of Admitted Students

Sr. No.		Name of the Student
1	Ku	BAGHELE AARTI OMSHANKAR
2	Ku	BHONDGE KUNALI SATISH
3	Ku	BOMBARDE SHREYA VIJAY
4	Ku	CHOUDHARI NANDINI DINKAR
5	Ku	DHARMIK DEVASHREE BHAURAO
6	Ku	DHOKE SANJANA ANKUSH
7		DHUDSE ADITYA RITESH
8	Ku	GUDADHE VINA DILIP
9	Ku	KALE SUMATI SANJAY
10		KHARE JATIN SURESH
11	Ku	KOSEKAR KOMAL KISANA
12	Ku	MEHAR HIMANSHI VIJAY
13	Ku	NANDANWAR SALONI ARUN
14		NEMADE RAM ARUN
15	Ku	PATEWAR SHARVARI MANIKRAO
16	Ku	RAUT MOHINI MANOHAR
17		SAWARKAR SWAYAM KISHOR
18	Ku	UIKEY KRITIKA YOGESH
19		WAHALE PRESHIT RAJESH
20	Ku	WANKAR NANDINI LAXMAN
21		JOSHI RUGVED DINESH
22	Ku	BANSOD ANJALI VISWAS
23	Ku	BEDADE MANISHA JANARDAN
24		TIJARE SANKET DIGAMBAR
25	Ku	KAMBLE SAYALI CHANDRAPAL
26	Ku	LONARKAR JANHAVI PRAMOD
27		MANWATKAR AAHAN DEEPAK
28	Ku	NARNAWARE SAKSHI ANIL
29	Ku	NIMJE ARNIKA SUSHILKUMAR
30	Ku	RAMTEKE HITALI PADMAKAR
31	Ku	RANGARI YASHIKA SUSHIL
32	Ku	SALVE SAKSHI NITIN
33	Ku	UIKE VIDYA MAROTRAO

34	Ku	UIKEY GAYATRI TEJRAM
35	Ku	WAHANE KOMAL DEVANAND
36	Ku	KHOTELE SWATI PURUSHOTTAM
37	Ku	CHAUDHARI DURGESHWARI RAMPRASAD
38	Ku	DHORE SADICHCHHA DILIP
39	Ku	MESHRAM MRUNALI ROSHAN
40		SELOKAR ADITYA RAJESH
41		ATTRI PRIYANSHU GYANENDRA SINGH
42		BANSPAL MAYUR RAGHVENDRA
43	Ku	BHANDARE KOPAL PRAKASH
44	Ku	DHOKE NATASHA SHUKRACHANDRA
45	Ku	MESHRAM MASUM SUDHAKAR
46	Ku	PALANDURKAR ANUSHKA AMAR
47		PATIL ROHIT SACHIN
48	Ku	PAWAR SUMAN SHEMEKHIL

Mr Mahesh D. Phalke

Coordinator & Head

Shri Shivaji Education Society Amravati's

Science College, Congress Nagar, Nagpur

2023-2024

Notice

All the students of B.Sc. Geology is hereby informed that the certificate course on "**Advanced Petrology"** Theory and practical classes will be held from **Friday & Saturday, 5th & 6th of April 2024 onwards at 04:00 pm to 06:00 pm.** For all Geology UG students admitted to this course in the Geology Department lab. The classes will start on time. All Students must attend both Theory and Practical classes.

Time: 04:00 PM to 06:00 PM.

Venue: Department of Geology Lab, SSESA's Science College, Congress Nagar, Nagpur

Mr Mahesh D. Phalke

Coordinator & Head

SSES AMRAVATI'S SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR-12

DEPARTMENT OF GEOLOGY

CERTIFICATE COURSE IN ADVANCED PETROLOGY

List of Admitted Students

Sr. No.		Name of the Student	Signature
1	Ku	BAGHELE AARTI OMSHANKAR	Aarti
2	Ku	BHONDGE KUNALI SATISH	
3	Ku	BOMBARDE SHREYA VIJAY	Shreyas
4	Ku	CHOUDHARI NANDINI DINKAR	
5	Ku	DHARMIK DEVASHREE BHAURAO	Devashree
6	Ku	DHOKE SANJANA ANKUSH	S.A. Dhoke
7		DHUDSE ADITYA RITESH	
8	Ku	GUDADHE VINA DILIP	Vina
9	Ku	KALE SUMATI SANJAY	Sumati
10		KHARE JATIN SURESH	Jatin
11	Ku	KOSEKAR KOMAL KISANA	
12	Ku	MEHAR HIMANSHI VIJAY	Himanshi
13	Ku	NANDANWAR SALONI ARUN	Saloni
14		NEMADE RAM ARUN	Ram
15	Ku	PATEWAR SHARVARI MANIKRAO	S.M. Patewar
16	Ku	RAUT MOHINI MANOHAR	Mohini
17		SAWARKAR SWAYAM KISHOR	Swayam
18	Ku	UIKEY KRITIKA YOGESH	Kritika
19		WAHALE PRESHIT RAJESH	
20	Ku	WANKAR NANDINI LAXMAN	
21		JOSHI RUGVED DINESH	Rugved
22	Ku	BANSOD ANJALI VISWAS	
23	Ku	BEDADE MANISHA JANARDAN	
24		TIJARE SANKET DIGAMBAR	Sanket
25	Ku	KAMBLE SAYALI CHANDRAPAL	
26	Ku	LONARKAR JANHAVI PRAMOD	Janhavi
27		MANWATKAR AAHAN DEEPAK	Aahan
28	Ku	NARNAWARE SAKSHI ANIL	Sakshi
29	Ku	NIMJE ARNIKA SUSHILKUMAR	
30	Ku	RAMTEKE HITALI PADMAKAR	Hitali
31	Ku	RANGARI YASHIKA SUSHIL	
32	Ku	SALVE SAKSHI NITIN	
33	Ku	UIKE VIDYA MAROTRAO	Vidya
34	Ku	UIKEY GAYATRI TEJRAM	

35	Ku	WAHANE KOMAL DEVANAND	Komal
36	Ku	KHOTELE SWATI PURUSHOTTAM	Swati
37	Ku	CHAUDHARI DURGESHWARI RAMPRASAD	D.R. Chaudhari
38	Ku	DHORE SADICHCHHA DILIP	Sadichchha
39	Ku	MESHRAM MRUNALI ROSHAN	Mrunali
40		SELOKAR ADITYA RAJESH	Aditya
41		ATTRI PRIYANSHU GYANENDRA SINGH	
42		BANSPAL MAYUR RAGHVENDRA	Mayur
43	Ku	BHANDARE KOPAL PRAKASH	Kopal
44	Ku	DHOKE NATASHA SHUKRACHANDRA	Natasha
45	Ku	MESHRAM MASUM SUDHAKAR	
46	Ku	PALANDURKAR ANUSHKA AMAR	Anushka
47		PATIL ROHIT SACHIN	Rohit
48	Ku	PAWAR SUMAN SHEMEKHIL	Suman

Mr Mahesh D. Phalke
Coordinator & Head

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SSES AMRAVATI'S SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR-12

DEPARTMENT OF GEOLOGY

CERTIFICATE COURSE IN ADVANCED PETROLOGY

Student's photographs during the course

Shri Shivaji Education Society Amravati's

Science College, Congress Nagar, Nagpur

2023-2024

Notice

All the students of B.Sc. Geology are here by informed that the certificate course on "**Advanced Petrology"** Final examination will be held on **Thursday, 7th of June 2024 at 11:00 AM.** For all Geology UG students admitted to this course in the Geology Department lab. The exam will start on time. All Students must attend this exam.

Time: 11:00 AM to 1:00 PM.

Venue: Department of Geology Lab, SSESA's Science College, Congress Nagar, Nagpur

Mr Mahesh D. Phalke

Coordinator & Head

SSES AMRAVATI'S SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR-12

DEPARTMENT OF GEOLOGY

CERTIFICATE COURSE IN ADVANCED PETROLOGY

Final Theory Examination Question Paper

Questions: 40 **Total marks:100**

Note: All questions are compulsory

Each question carries 2 marks

1. The branch of geology which deals with various aspects of rocks is _____
   a) Petrology
   b) Mineralogy
   c) Lithology
   d) Rockology
2. What is the chemical composition of Quartz?
   a) SiO_4
   b) Si_2O_3
   c) SiO_2
   d) Al_2O_3
3. Which of the following is not true about a mineral?
   a) Naturally occurring
   b) Inorganic substance
   c) Organic substance
   d) Definite chemical composition
4. Mineralogy deals with?
   a) Individual properties of minerals
   b) Formation of minerals
   c) More of occurrence
   d) Properties, formation and occurrence
5. Carbonate minerals are found usually in _____
   a) Igneous rocks
   b) Sedimentary rocks
   c) Sedimentary and metamorphic rocks
   d) Metamorphic and igneous rocks
6. Which quartz mineral shows blue colour?
   a) Rose quartz
   b) Blue quartz
   c) Smoky quartz
   d) Rock crystal
7. The streak given by the quartz group is _____
   a) White
   b) Colourless
   c) Blue
   d) Pale yellow

8. What is the cleavage shown by quartz minerals?
a) Basal
b) Prismatic
c) Rhombohedral
d) No cleavage

9. Quartz is found in which type of rock?
a) Igneous rock
b) Sedimentary rock
c) Metamorphic rock
d) Igneous, sedimentary and metamorphic rocks

10. Stratification can be seen widely in which of the following rocks?
a) Igneous rocks
b) Metamorphic rocks
c) Sedimentary rocks
d) Fossil rocks

11. Outcrop is seen on land everywhere on earth.
a) True
b) False

12. What is the state of lava or magma?
a) Liquid always
b) Solid
c) Gaseous
d) Mixture of liquid, crystals and gases

13. Where are the volcanic rocks formed?
a) Under the surface of earth
b) On the surface of earth
c) Inside the core
d) Between mantle

14. What is the grain size of volcanic rocks?
a) Very coarse
b) Coarse
c) Intermediate
d) Very fine

15. The rock is coarse grained in _____
a) Volcanic rocks
b) Plutonic rocks
c) Hypabyssal rocks always
d) Not found in igneous rocks

16. Pick the plutonic igneous rock.
a) Granite
b) Granite porphyry
c) Syenite porphyry
d) Marble

17. The rocks which exhibit mixed characteristics of volcanic and plutonic rocks are _____
a) Intermediate rocks
b) Mixed rocks
c) Hypabyssal rocks
d) Secondary rocks

18. Which is the most dominant constituent of igneous rock?
a) Al_2O_3
b) SiO_2

c) $CaCO_3$
d) CaO

19. The texture of granite is _____
a) Equigranular
b) Directive
c) Inequigranular
d) Intergrowth

20. What can be said about the grain size of pegmatite?
a) Fine grained
b) Medium grained
c) Fine to medium grained
d) Coarse grained

21. Which rock is also called secondary rock?
a) Igneous rock
b) Sedimentary rock
c) Metamorphic rock
d) No class of rock is termed so

22. Which is the rock present in the majority on the surface of earth?
a) Igneous rock
b) Sedimentary rock
c) Metamorphic rock
d) No class of rock in particular

23. Rock salt may be formed by _____
a) Erosion
b) Winds
c) Continued evaporation
d) Continued precipitation

24. Animal and vegetable life don't contribute to the formation of sedimentary rocks.
a) True
b) False

25. The layered arrangement in sedimentary rocks is called _____
a) Mud cracks
b) Stratification
c) Rain prints
d) Ripple marks

26. Type of bedding where sorting and arrangement has occurred based on grain size is _____
a) Cross bedding
b) Lamination
c) Graded bedding
d) Mud cracks

27. Graded bedding occurs due to which phenomenon?
a) Wind settling
b) Sunlight
c) Gravitational settling
d) Loading

28. Mud cracks are common in which type of sedimentary rocks?
a) Fine grained
b) Medium grained
c) Coarse grained
d) Not particular

29. Give an example for rudaceous rock.
a) Breccia
b) Shale
c) Limestone
d) Sandstone

30. Which of the following are finest grain sized?
a) Rudaceous rocks
b) Arenaceous rocks
c) Argillaceous rocks
d) Psephites

31. Conglomerate belong to which group of sedimentary rocks?
a) Rudaceous rocks
b) Argillaceous rocks
c) Arenaceous rocks
d) Any group

32. Sandstone belongs to which group of sedimentary rocks?
a) Rudaceous rocks
b) Argillaceous rocks
c) Arenaceous rocks
d) Any group

33. Conglomerates consist of which shaped fragments mostly?
a) Angular
b) Sub-angular
c) Rounded
d) Edged

34. Which is the dominant mineral in sandstone?
a) Mica
b) Diamond
c) Quartz
d) Felspar

35. The term quartzite is associated with which type of sandstone?
a) Siliceous sandstone
b) Calcareous sandstone
c) Argillaceous sandstone
d) Ferruginous sandstone

36. Red Fort in India is built using which sedimentary rock?
a) Shale
b) White Sandstone
c) Red sandstone
d) Breccia

37. The non-clastic sedimentary rock chiefly made of carbonate of calcium is _____
a) Limestone
b) Sandstone
c) Shale
d) Breccia

38. The major use of limestone is _____
a) Primary source material for manufacture of Portland cement
b) Used in metallurgical industries as flux
c) Used as building stone
d) Used as a source of magnesium

39. What is a metamorphosed sedimentary rocks?
a) Shale
b) Limestone
c) Coal
d) Dolomite

40. The grade of coal with very low calorific value is _____
a) Peat
b) Lignite
c) Bituminous
d) Anthracite

Shri Shivaji Education Society Amravati's

Science College, Congress Nagar, Nagpur

2023-2024

Notice

All the students of B.Sc. Geology are here by informed that the certificate course on "**Advanced Petrology" Practical** examination will be held on **Tuesday, 8th of June 2024 at 11:00 AM.** For all Geology UG students admitted to this course. The exam will start on time. All Students must attend this exam.

Time: 11:00 AM to 1:00 PM.

Venue: Department of Geology Lab, SSESA's Science College, Congress Nagar, Nagpur

Mr Mahesh D. Phalke

Coordinator & Head

SSES AMRAVATI'S SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR-12

DEPARTMENT OF GEOLOGY

CERTIFICATE COURSE IN ADVANCED PETROLOGY

Final Practical Examination Question Paper

Total marks:20

Note: All questions are compulsory

Each question carries 10 marks

Q.1 Identify the given minerals in hand specimens. (3-spots) Marks-06

Q.2 Identify given rocks in hand specimens and under a microscope. (7-spots) Marks-14

Mr Mahesh D. Phalke

Coordinator & Head

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Shri Shivaji Education Society, Amravati's

SCIENCE COLLEGE

Congress Nagar, Nagpur-12 (M.S.), India

Accredited with CGPA of 3.51 at 'A+' grade by NAAC, Bangalore
A "College with Potential for Excellence" identified by UGC New Delhi.
Institutional Member of APQN
Recognized Centre for Higher Learning and Research
Mentor College under 'PARAMARSH Scheme', UGC, New Delhi

Add-on Course (Geology Department)

Course Exam Name: Certificate Course in Advanced Petrology

Name of Student: Baghele Aarti Omshankar

Roll No.: 001

Session: 2023-24

Test Date: 08/06/2024

Max. Marks: 80

Coordinator- Mr. M. D. Phalke

Obtained Marks: 76

INSTRUCTIONS FOR FILLING THE SHEET
1. This sheet should not be folded or crushed
2. Use only blue/ black ball point pen to fill the circles.
3. Use of pencil is strictly prohibited.
4. Circles should be darkened completely and properly.
5. Cutting and erasing on this sheet is not allowed.
6. Do not use any stray marks on the sheet.
7. Do not use marker or white fluid to hide the mark.

WRONG METHODS CORRECT METHOD

	A	B	C	D
1	●	○	○	○
2	○	○	●	○
3	○	○	●	○
4	○	○	○	●
5	○	●	○	○
6	○	●	○	○
7	○	●	○	○
8	○	○	○	●
9	○	○	○	●
10	○	○	●	○
11	●	○	○	○
12	○	○	○	●
13	○	●	○	○
14	○	○	○	●
15	○	●	○	○
16	●	○	○	○
17	○	○	●	○
18	○	○	○	○
19	●	○	○	○
20	○	○	○	●
21	○	●	○	○
22	●	○	○	○
23	○	○	○	●
24	○	●	○	○
25	○	●	○	○
26	○	○	●	○
27	○	○	●	○
28	●	○	○	○
29	●	○	○	○
30	○	○	●	○
31	●	○	○	○
32	○	○	●	○
33	○	○	○	○
34	○	○	●	○
35	●	○	○	○
36	○	○	●	○
37	●	○	○	○
38	●	○	○	○
39	○	○	●	○
40	●	○	○	○
41	○	○	○	○
42	○	○	○	○
43	○	○	○	○
44	○	○	○	○
45	○	○	○	○
46	○	○	○	○
47	○	○	○	○
48	○	○	○	○
49	○	○	○	○
50	○	○	○	○

Mr Mahesh D. Phalke

Coordinator & Head

SSES AMRAVATI'S SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR-12

DEPARTMENT OF GEOLOGY

EXAMINATION OF CERTIFICATE COURSE IN ADVANCED PETROLOGY

Final Mark list of examination (Theory & Practical)

Sr. No.		Name of the Student	Marks Obtained (Out of 80)	Practical Marks (Out of 20)	Grade
1	Ku	BAGHELE AARTI OMSHANKAR	76	20	O
2	Ku	BHONDGE KUNALI SATISH	72	20	O
3	Ku	BOMBARDE SHREYA VIJAY	70	20	A+
4	Ku	CHOUDHARI NANDINI DINKAR	78	20	O
5	Ku	DHARMIK DEVASHREE BHAURAO	70	20	A+
6	Ku	DHOKE SANJANA ANKUSH	56	20	A
7		DHUDSE ADITYA RITESH	64	20	A+
8	Ku	GUDADHE VINA DILIP	70	20	A+
9	Ku	KALE SUMATI SANJAY	72	20	O
10		KHARE JATIN SURESH	70	20	A+
11	Ku	KOSEKAR KOMAL KISANA	72	20	O
12	Ku	MEHAR HIMANSHI VIJAY	32	18	C
13	Ku	NANDANWAR SALONI ARUN	80	20	O
14		NEMADE RAM ARUN	72	20	O
15	Ku	PATEWAR SHARVARI MANIKRAO	c	20	O
16	Ku	RAUT MOHINI MANOHAR	68	20	A+
17		SAWARKAR SWAYAM KISHOR	64	20	A+
18	Ku	UIKEY KRITIKA YOGESH	66	20	A+
19		WAHALE PRESHIT RAJESH	68	20	A+
20	Ku	WANKAR NANDINI LAXMAN	70	20	A+
21		JOSHI RUGVED DINESH	72	20	O
22	Ku	BANSOD ANJALI VISWAS	68	20	A+
23	Ku	BEDADE MANISHA JANARDAN	70	20	A+
24		TIJARE SANKET DIGAMBAR	78	20	O
25	Ku	KAMBLE SAYALI CHANDRAPAL	76	20	O

26	Ku	LONARKAR JANHAVI PRAMOD	80	20	O
27		MANWATKAR AAHAN DEEPAK	80	20	O
28	Ku	NARNAWARE SAKSHI ANIL	74	20	O
29	Ku	NIMJE ARNIKA SUSHILKUMAR	80	20	O
30	Ku	RAMTEKE HITALI PADMAKAR	68	20	A+
31	Ku	RANGARI YASHIKA SUSHIL	76	20	O
32	Ku	SALVE SAKSHI NITIN	72	20	O
33	Ku	UIKE VIDYA MAROTRAO	70	20	A+
34	Ku	UIKEY GAYATRI TEJRAM	78	20	O
35	Ku	WAHANE KOMAL DEVANAND	72	20	O
36	Ku	KHOTELE SWATI PURUSHOTTAM	66	20	A+
37	Ku	CHAUDHARI DURGESHWARI RAMPRASAD	74	20	O
38	Ku	DHORE SADICHCHHA DILIP	72	20	O
39	Ku	MESHRAM MRUNALI ROSHAN	76	20	O
40		SELOKAR ADITYA RAJESH	66	20	A+
41		ATTRI PRIYANSHU GYANENDRA SINGH	36	18	B
42		BANSPAL MAYUR RAGHVENDRA	48	18	B+
43	Ku	BHANDARE KOPAL PRAKASH	62	20	A+
44	Ku	DHOKE NATASHA SHUKRACHANDRA	68	20	A+
45	Ku	MESHRAM MASUM SUDHAKAR	68	20	A+
46	Ku	PALANDURKAR ANUSHKA AMAR	70	20	A+
47		PATIL ROHIT SACHIN	72	20	O
48	Ku	PAWAR SUMAN SHEMEKHIL	60	20	A

Grading: 91-100-O, 81-90-A+, 71-80- A, 61-70- B+, 51-60-B, 46-50- C, 45-P

Mr Mahesh D. Phalke

Coordinator & Head

Shri Shivaji Education Society Amravati's

SCIENCE COLLEGE, CONGRESS NAGAR,

NAGPUR

Accredited with CGPA of 3.51 at 'A+' Grade

A College with Potential for Excellence

CERTIFICATE

Mr./Ku. **Baghele Aarti Omshankar** is awarded with certificate on successful completion of the course entitled, Certificate course in "Advanced Petrology".

Session 2023-24 under Add-on course conducted for 30 hours from 1/3/2024 to 31/05/2024 by Department of Geology, SSESA's, Science College, congress Nagar, Nagpur 440012.

He/She has passed the Examination with '**O**' Grade.

Mr. M. D. Phalke
Coordinator, Department of Geology

Prof. M. P. Dhore
Principal, Science College, Nagp

Mr Mahesh D. Phalke

Coordinator & Head

SSES AMRAVATI'S SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR-12

DEPARTMENT OF GEOLOGY

ATTENDANCE OF CERTIFICATE COURSE IN ADVANCED PETROLOGY

Students Attendance of both (Theory & Practical) classes

Shri Shivaji Education Society Amravati's Science College, Congress Nagar, Nagpur.

Month 1st April to 31st May, 2024

Name of Teacher :- Mr. Mahesh Devidas Phalke

Subject :- Certificate Course in Advanced Petrology

Theory / Practical

2023-2024

Sr. No	Roll no.		Students Full Name	Total upto last Month			Periods	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
				Deli	Att		Date / Contact No	5/04/24	6/04/24	12/04/24	13/04/24	19/04/24	20/04/24	26/04/24	27/04/24	3/05/24	4/05/24	10/05/24	11/05/24	17/05/24	18/05/24	24/05/24	25/05/24	31/05/24			
1	1	Ku	BAGHEL AARTI OMSHANKAR					P	P	P	.	P	P	.	P	P	P	P	P	.	P	P	P	P			
2	2	Ku	BHONDGE KUNAL SATISH					P	P	P	P	P	.	.	P	P	P	P	P	P	P	P	P	.			
3	3	Ku	BOMBARDE SHREYA VIJAY					P	.	P	P	.	P	P	.	P	P	P	.	P	P	P	.	P			
4	4	Ku	CHOUDHARI NANDINI DINKAR					P	P	.	P	.	P	P	P	:	P	.	P	P	P	.	P	P			
5	5	Ku	DHARMIK DEVASHRI BHAURAO					P	P	P	.	P	.	P	P	.	P	P	.	.	P	P	P	.			
6	6	Ku	DHOKE NANDANA ANKUSH					P	P	P	.	.	P	P	P	P	P	P	.	.	P	P	P	P			
7	7		DHUDSE ADITYA RITESH					P	P	P	P	.	.	P	P	P	P	P	P	P	P	P	.	.			
8	8	Ku	GUDADHE VINA DILIP					P	P	P	P	.	.	P	P	.	P	P	.	.	P	P	.	P			
9	9	Ku	KALE SUMATI SANJAY					P	P	P	P	.	P	P	P	.	P	P	P	.	P	P	P	P			
10	10		KHARE JATIN SURESH					P	.	P	P	.	P	.	P	P	P	P	P	P	P	P	P	P			
11	11	Ku	KOSLEKAR KOMAL KISANA					P	P	P	P	P	P	P	P	P	P	P	.	.	P	.	P	.			
12	12	Ku	MEHAR HIMANSHI VIJAY					P	P	–	P	P	.	P	P	P	.	P	P	.	P	P	P	P			
13	13	Ku	NANDANWAR SALONI ARUN					P	P	P	P	.	P	P	P	.	P	P	P	P	P	.	P	P			
14	14		NEMADE RAM ARUN					P	P	P	P	.	.	P	.	P	P	.	.	P	.	P	.	P			
15	15	Ku	PATEWAR SHARVARI MANIKRAO				P	P	P	.	P	P	.	P	P	P	.	P	P	P	P	P	P	P			
16	16	Ku	RAUT MOHINI MANOHAR				P	P	.	P	P	.	P	.	P	P	P	.	.	P	P	P	P	.			
17	17		SAWARKAR SWAYAM KISHOR				P	P	P	P	.	P	P	.	.	P	P	P	P	P	P	.	P	P			

18	18	Ku	UIKEY KRITIKA YOGESH	P	•	•	P	P	P	•	P	•	P	P	•	P	P	•	P	P	•						
19	19		WAHALE PRESHEI RAJESH	P	P	P	•	•	P	P	•	P	•	P	P	P	P	P	P	•	•						
20	20	Ku	WANKAR NANDINI LAXMAN	P	•	P	•	P	P	P	•	P	P	P	P	•	P	P	•	P							
21	21		JOSHI RUGVED DINESH	•	P	P	•	P	P	P	P	P	•	P	•	P	P	P	•	P							
22	22	Ku	HANSODA NJALI VINWAS	P	P	P	P	P	•	•	•	P	•	P	P	•	•	P	P	P							
23	23	Ku	BUDADE MANISHA JANARDAN	P	•	P	P	P	•	P	•	P	P	•	P	•	P	P	P	P							
24	24		TIJARE SANKET DIGAMBAR	•	P	P	P	P	•	P	•	P	•	P	•	P	P	P	P	•							
25	25	Ku	KAMBLE SAYALI CHANDRAPAL	P	P	P	P	P	•	P	•	P	P	P	•	P	•	P	P	P							
26	26	Ku	LONARKAR JANHAVI PRAMOD	P	•	P	P	•	•	P	P	P	•	P	P	P	P	P	•	P							
27	27		MANWATKAR AAHAN DILIPAK	P	P	P	•	P	•	P	•	P	P	•	P	P	P	•	P	P							
28	28	Ku	NARNAWARE SAKSHI ANIL	•	•	P	P	•	P	•	P	P	P	P	•	P	P	P	P	P							
29	29	Ku	NIMBLARNIKA SUSHIL KUMAR	•	P	P	•	P	•	•	P	•	P	•	P	P	P	•	P	P							
30	30	Ku	RAMTEKE HEMALI PADMAKAR	•	P	P	P	P	•	•	P	•	P	P	P	•	•	P	P	P							
31	31	Ku	RANGARI YASHIKA SUSHIL	P	P	P	P	P	•	•	P	P	•	P	P	P	•	•	P	P							
32	32	Ku	SALVE SAKSHI NITIN	•	•	P	•	P	•	P	P	•	P	•	P	P	P	P	P	P							
33	33	Ku	UIKE VIDYA MAROTRAO	P	P	P	•	•	P	•	•	P	P	P	•	•	P	P	P	P							
34	34	Ku	UIKEY GAYATRI TIJRAM	P	•	P	•	P	•	P	P	•	•	P	P	•	•	P	P	P							
35	35	Ku	WAHANE KOMAL DEVANAND	•	P	•	P	•	P	•	P	P	P	P	•	P	P	P	P	P							
36	36	Ku	KHOTELE SWATI PURSHOTTAM	P	P	•	P	•	P	•	P	P	P	P	•	•	P	P	P	P							
37	37	Ku	CHAUDHARI DURGESHWARI RAMPRASAD	P	P	P	P	P	•	•	P	P	•	P	P	•	P	•	P	P							
38	38	Ku	DHORE SADICHCHHA DILIP	P	•	P	P	P	•	P	•	P	P	P	•	P	•	P	P	P							
39	39	Ku	MESHRAM MRUNALI ROSHAN	P	•	P	P	•	P	P	P	P	•	•	•	P	P	P	P	•							
40	40		SILOKAR ADITYA RAJESH	P	P	P	P	•	•	P	P	•	P	P	P	P	•	•	P	P							
41	41		ATERI PRIYANSHU GYANENDRA SINGH	P	P	P	P	P	P	P	P	P	•	•	•	P	P	•	•	P							
42	42		BANSPAL MAYUR RAGHVENDRA	•	•	P	P	P	•	•	P	P	•	P	P	P	P	P	•	P							

43	43		BHANDARE KOPAL PRAKASH	P	P	•	P	P	P	P	•	•	P	•	P	P	P	P	•	P							
44	44	Ku	DHOKE NATASHA SHUKRACHANDRA	P	P	P	•	•	P	•	P	P	P	P	•	•	P	P	P	P							
45	45	Ku	MESHRAM MASUM SUDHAKAR	P	P	•	P	P	P	•	•	P	•	P	•	P	•	P	P	P							
46	46	Ku	PALANDURKAR ANUSHKA AMAR	P	P	P	P	P	•	P	•	P	•	P	P	•	P	P	•	P							
47	47		PATIL ROHIT SACHIN	•	P	P	P	P	•	P	P	•	P	P	•	P	•	P	P	•							
48	48	Ku	PAWAR SUMAN SHEMEKHIL	•	P	•	P	P	P	P	P	•	P	P	•	P	•	P	•	P							

Coordinator

18	18	Ku	UIKEY KRITIKA YOGESH	.	P	P	P	P	P	.	.	P															
19	19		WAHALE PRESHIT RAJESH	.	P	P	.	P	P	P	.	P															
20	20	Ku	WANKAR NANDINI LAXMAN	P	P	.	P	P	P	P	P	P															
21	21		JOSHI RUGVED DINESH	P	P	P	P	P	P	P	P	.															
22	22	Ku	BANSOD ANJALI VISWAS	P	P	P	.	.	P	P	.	P															
23	23	Ku	BUDADE MANISHA JANARDAN	P	.	P	.	P	P	P	P	.															
24	24		THARE SANKET DIGAMBAR	.	P	P	P	.	P	P	.	P															
25	25	Ku	KAMBLE NAYALI CHANDRAPAL	.	P	.	P	P	P	P	.	P															
26	26	Ku	LONARKAR JANHAVI PRAMOD	P	P	P	.	.	P	P	P	P															
27	27		MANWATKAR AMAN DEEPAK	P	.	.	P	P	P	P	P	P															
28	28	Ku	NARNAWARE SAKSHI ANIL	P	.	P	P	.	P	P	P	.															
29	29	Ku	NIMJE ARNIKA NISHIKUMAR	P	.	.	P	P	P	P	.	P															
30	30	Ku	RAMTEKE HIRALI PADMAKAR	P	.	P	P	P	P	.	P	.															
31	31	Ku	RANGARI YASHIKA SUSHIL	P	P	P	P	P	.	.	P	P															
32	32	Ku	SALVE SAKSHI NITIN	P	P	.	.	P	P	.	P	P															
33	33	Ku	UIKE VIDYA MAROTRAO	P	.	P	.	P	P	P	P	P															
34	34	Ku	UIKEY GAYATRI TEJRAM	.	P	P	P	P	P	.	.	P															
35	35	Ku	WAHANE KOMAL DEVANAND	.	P	P	.	P	.	P	P	.															
36	36	Ku	KHOTELE SWATI PURUSHOTTAM	P	.	P	P	P	P	P	.	P															
37	37	Ku	CHAUDHARI DURGESHWARI RAMPRASAD	P	.	P	P	P	P	.	P	.															
38	38	Ku	DHORE SADICHCHHA DILIP	.	P	P	P	P	.	P	.	P															
39	39	Ku	MISHRAM MRUNALI ROSHAN	.	P	P	P	P	.	.	P	P															
40	40		SELOKAR ADITYA RAJESH	.	P	P	P	.	.	P	P	P															
41	41		ATTRI PRIYANSHU GYANENDRA SINGH	P	.	P	P	.	P	P	P	P															
42	42		BANSPAL MAYUR RAGHVENDRA	P	.	P	P	P	.	P	P	P															

Shri Shivaji Education Society Amravati's
Science College, Congress Nagar, Nagpur.

Month **1st April to 31st May, 2024**

Name of Teacher :- **Mr. Mahesh Devidas Phalke**

Subject :- Certificate Course in Advanced Petrology

Theory / Practical

2023-2024

Sr. No	Roll no.		Students Full Name	Total work last Month		Periods	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
				Deli	Att	Date / Contact No.	6/04/24	13/04/24	20/04/24	27/04/24	4/05/24	11/05/24	18/05/24	25/05/24	31/05/24											
1	1	Ku	BAGHELE AARTI OMSHANKAR				P	P	.	P	P	P	P	P	P											
2	2	Ku	BHONDGE KUNAL SATISH				P	.	P	P	P	P	.	P	.											
3	3	Ku	BOMBARDE SHREYA VIJAY				P	P	P	.	.	P	P	P	P											
4	4	Ku	CHOUDHARI NANDINI DINKAR				P	P	.	P	P	P	'	P	P											
5	5	Ku	DHARMIK DEVASHREE BHAURAO				P	P	-	P	P	.	P	P	P											
6	6	Ku	DHOKE SANJANA ANKUSH				P	.	P	P	P	.	P	P	P											
7	7		DIRDSE ADITYA RITESH				P	P	P	.	P	.	P	P	.											
8	8	Ku	GUDADHE VINA DILIP				P	P	P	P	P	.	P	P	.											
9	9	Ku	KALE SUMATI SANJAY				P	P	P	P	P	P	.	P	P											
10	10		KHARE JATIN SURESH				P	P	.	P	P	-	P	P	P											
11	11	Ku	KOSLKAR KOMAL KISANA				P	P	P	P	.	.	P	P	P											
12	12	Ku	MUHAR HIMANSHI VIJAY				P	P	P	.	P	P	P	P	P											
13	13	Ku	NANDANWAR SALONI ARUN				P	P	P	P	P	.	.	P	P											
14	14		NEMADE RAM ARUN				P	P	P	P	P	P	P	.	P											
15	15	Ku	PATEWAR SHARVARI MANIKRAO				P	P	P	.	P	.	P	.	P											
16	16	Ku	RAUT MOHINI MANOHAR				P	P	-	.	.	P	P	.	P											
17	17		SAWARKAR SWAYAM KISHOR				P	P	.	.	.	P	P	P	P											

43	43		BHANDARI KOPAL PRAKASH	A	P	P	P	P	•	P	•	P													
44	44	Ku	DHOKLNAVASHYASHUKRACHANDRA	P	P	P	P	P	•	P	•	P													
45	45	Ku	MESHRAM MASUM SUDHAKAR	P	P	P	•	P	•	P	P	•													
46	46	Ku	PALANDURKAR ANUSHKA AMAR	•	P	P	•	P	P	P	P	•													
47	47		PATIL ROHIT SACHIN	•	P	P	P	P	•	P	P	P													
48	48	Ku	PAWAR SUMAN SHIVMEKHH	P	P	P	P	•	P	•	P	P													

Coordinator

Shri Shivaji Education Society Amravati's

SCIENCE COLLEGE, CONGRESS NAGAR, NAGPUR

Session 2023 – 2024

Department of Geology

Report on "Certificate Course on Advanced Petrology"

COORDINATOR

Mr. Mahesh Devidas Phalke

Duration: 1/04/2024 to 31/05/2024

Time: 04:00 PM– 6:00 PM

Department of Geology, SSESA's Science College, Nagpur organised a Certificate course on **"Certificate Course on Advanced Petrology"** for all UG students of B.Sc. Geology and the duration of the course from 1st April 2024 to 31st June 2024 from 04:00 PM to 06:00 PM each Friday and Saturday of the week in the given period. The coordinator of this program was Mr Mahesh Devidas Phalke conducted all the necessary lectures and practicals and other all related work of this course. The Programme started with the permission of Principal Prof. M. P. Dhore. All three-year students of Geology registered their names for this course and all 78 students successfully completed this course with good grades in the final exam. The outcome of this course is an advanced petrology course that mainly focuses on the in-hand and on-field experience of different minerals and rocks exposed in the field, providing students with a comprehensive understanding of the physical properties of the rocks. This course integrates the fundamental knowledge of the mainly three types of rocks studied under the branch of petrology. It prepares students for careers in geoscience, research and geoscience-related fields. Petrology is very important to know the status of the area in order to know the soil type, groundwater conditions, drainage, crop patterns etc in order to perform different work.

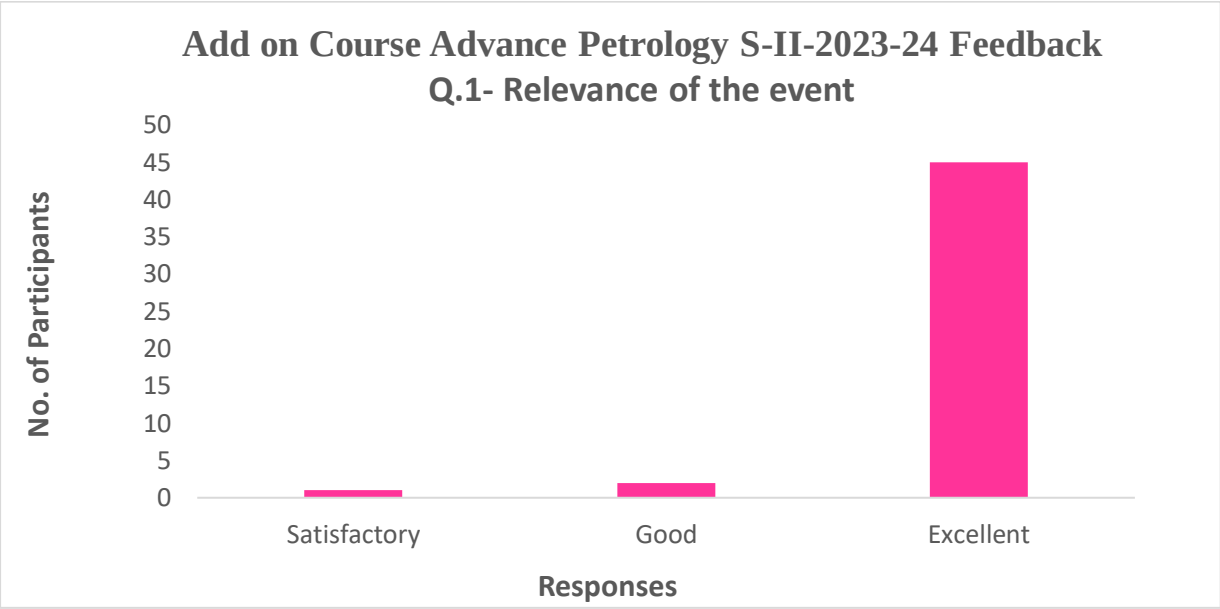
Coordinator & Head

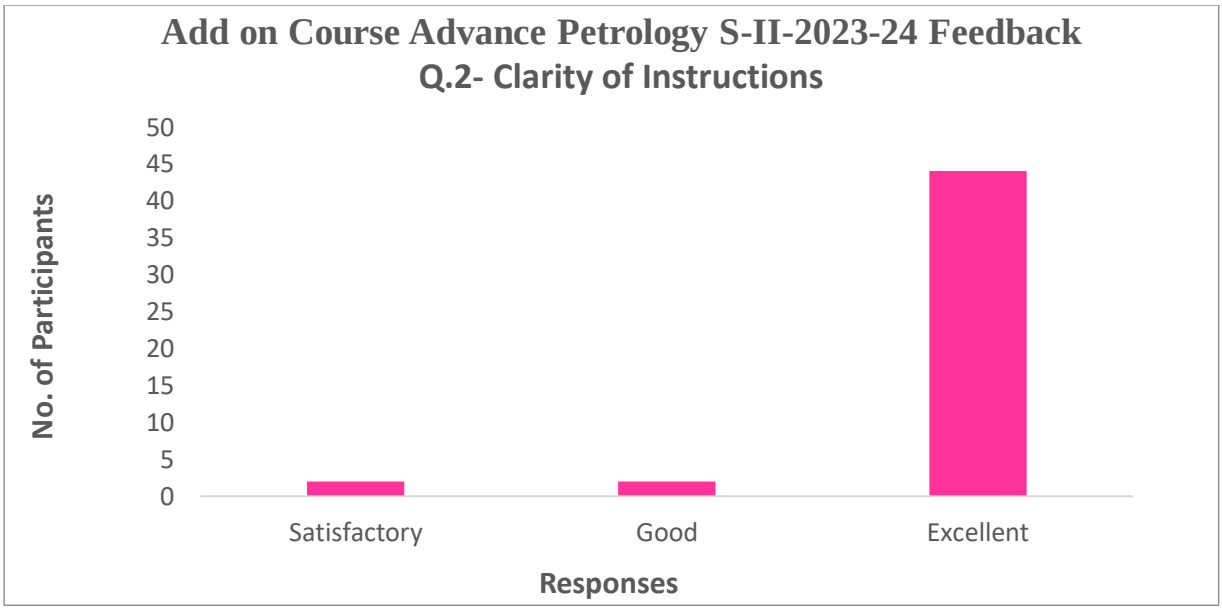
Action Taken Report

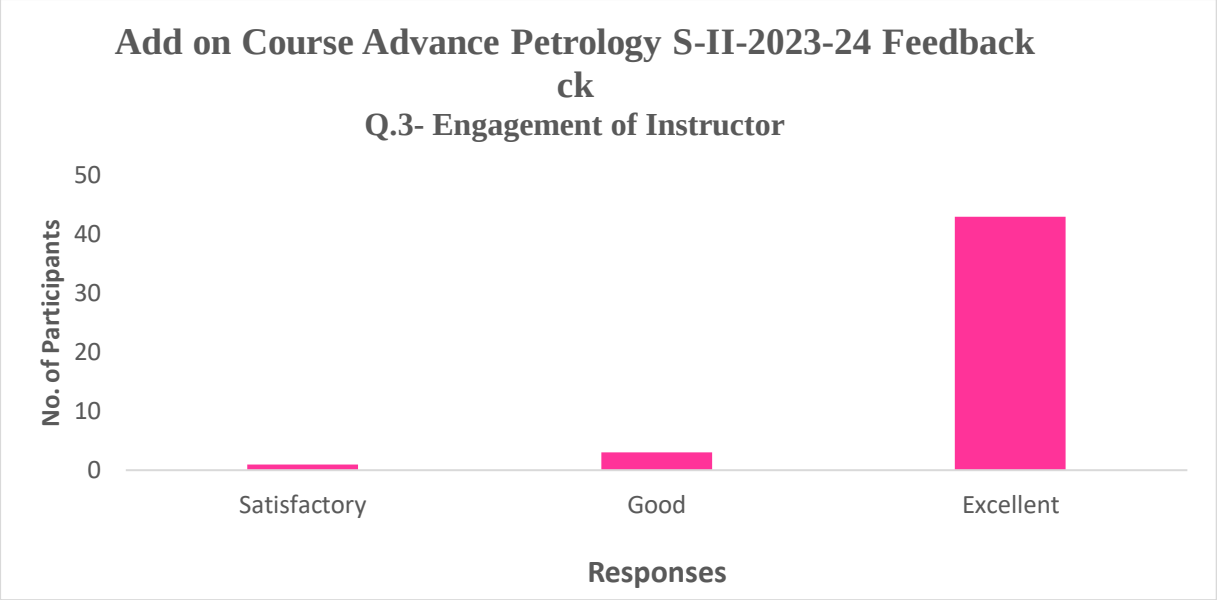
The department and college authority has assured that matter will be placed in Governing Body Meeting for necessary discussion. In response to their claim for more skill based introduced Skill based course on geology from academic year 2023-24 session II. Due care will be taken for more skill-based courses in future. It prepares students for careers in geoscience, research and geoscience-related fields. Petrology is very important to know the status of the area in order to know the soil type, groundwater conditions, drainage, crop patterns etc in order to perform different work.

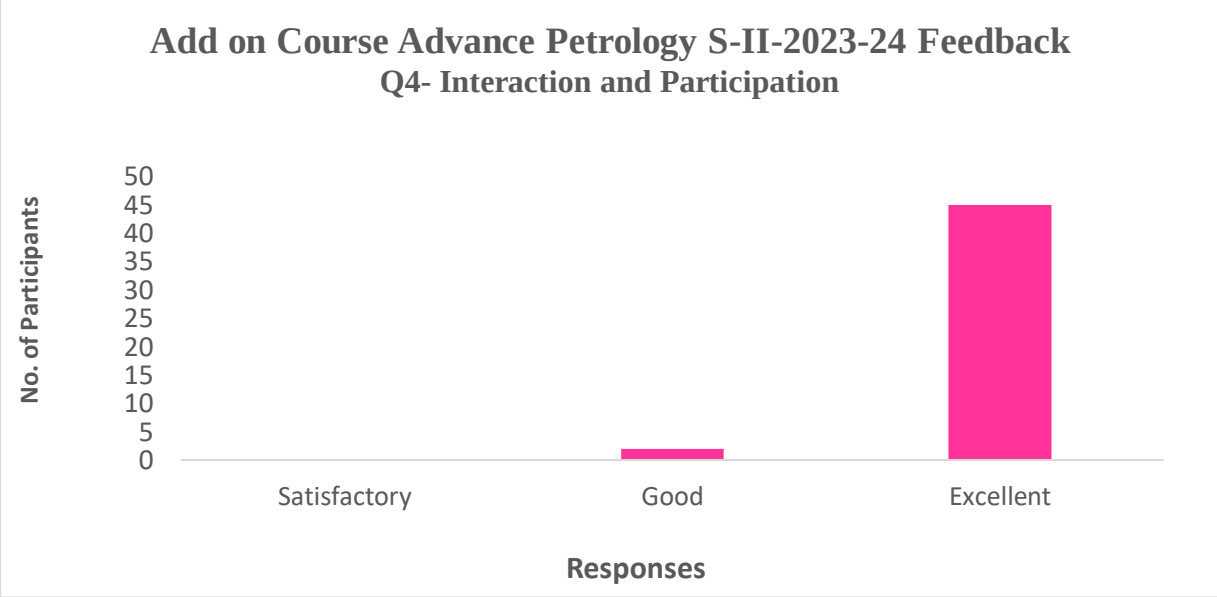
Feedback Analysis:

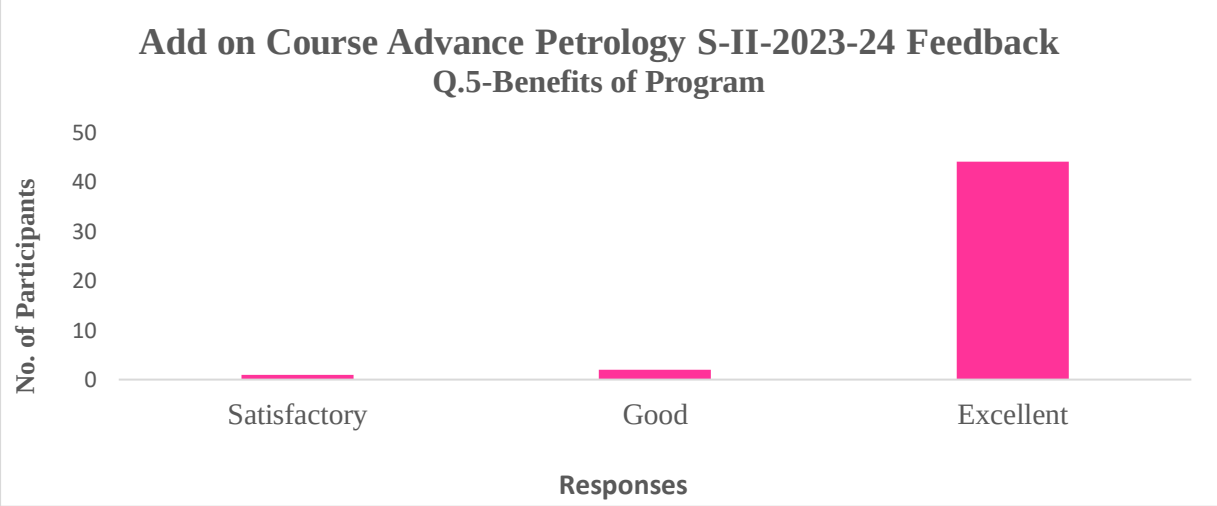
After successful completion of the course feedback from all the present students was collected. Analysis of feedback were done and after feedback analysis following observation noted remarkably.






Add on Course Advance Petrology S-II-2023-24 Feedback
ck
Q.3- Engagement of Instructor
No. of Participants
50
40
30
20
10
0
Satisfactory
Good
Excellent
Responses


Add on Course Advance Petrology S-II-2023-24 Feedback
Q4- Interaction and Participation
No. of Participants
50
45
40
35
30
25
20
15
10
5
0
Satisfactory
Good
Excellent
Responses


Add on Course Advance Petrology S-II-2023-24 Feedback
Q.5-Benefits of Program
No. of Participants
50
40
30
20
10
0
Satisfactory
Good
Excellent
Responses