QUESTION BANK

CHAPTER : WORK OF RIVER

1) Choose the correct answer :- (5)

a) The exogenetic processes are - (sudden / fast / slow)

→ Slow

b) By aggradation, the height of landform is (reduced / remain same / increased / subsided)

→ increased

c) Pot holes are formed by (corrasion / hydraulic action / abrasion / attrition)

→ abrasion

d) Waterfall is found in river's (mature stage / old stage / youthful stage)

→ Youthful stage

e) (Jog / Hudru / Sivasanudram) is the highest waterfall in India.

→ Jog

2) Fill in the blanks :- (5)

a) Delta is formed by river deposition at the mouth

b) Angel fall is the highest waterfall in the world

c) Delta of Ebro is the example of cuspate delta

d) Old stage of river is also called delta

e) A series of rapids are called a cascade

3) Write 'True' or 'False' :- (5)

a) Lateral corrasion of a river is a process of down cutting. (False)

b) Small streams and rivers that join the main stream, are called distributaries (False.)

c) The upland which divide the channels are known as waterdivides or watersheds. (True)

d) Padma is the tributary of Ganga (False.)

e) The heavier particles of rock are forced by the river to roll on the floor of river channel is called solution. (False.)

4) Write answer in one word : (5×2 = 10)

a) What is sixth power law ?

→ If river velocity doubles, the load carrying capacity of the river increases by 2^6. This is known as sixth power Law.

b) What is estuary ?

→ Estuary is a funnel shaped river mouth in which no deposition of sediments found. Eg: Estuary of river Ob is the largest estuary of world.

c) Name one arcuate delta ?

→ Nile Delta.

d) What is Cusec ?

→ The discharge of the volume of water flowing in river is measured over time i.e in cubic feet per second is called cusec.

5) Answere the following questions (5×2 = 10)

a) How is waterfall formed?

→ Waterfall is manly formed in the mountainous and plateau region when the hard rocks and soft rocks are horizontally arranged. Hard rock lies over soft rock. Due to severe erosion the soft rocks are removed away and hard rock hang over the soft rock layers cause in formation of Waterfall. Eg: Yog

b) Write a note on delta.

→ In the lower course of a river, slope of the land decreases remarkable causes the river to become sluggish. The load carrying capacity decreases to great extent and ultimately deposited into the sea. The deposition sometime builds up fan shaped alluvial cone which often looks like greek letter (Δ) delta on it mouth and its called delta. Eg: Ganga - Brahmaputra Delta.

c) What is Attrition?

→ The process by which the river carried materials get collided with each other and become smaller in size. is known as attrition.

d) Describe the formation of potholes.

→ Tiny holes formed on the river bed due to strike of stones or pebbles by the process of abrasion ~~are called potholes~~. causes the formation of potholes.

e) What is canyon?

→ A canyon is the landform produced by fluvial erosion in the mountainous region. It is a deep narrow steep sided 'I' shaped valley. It is mainly produced by vertical corrasion in dry region due to scanty of rainfall. Eg: Grand Canyon

6) Answer in brief:-

a) Differentiate between Gorges and Canyon.

Gorges	Canyon
(i) Gorges are narrow steep sided valley.	(i) Canyon are deep narrow steep sided valley
(ii) 'V' shaped valley	(ii) 'I' shaped valley
(iii) Produced by lateral and vertical corrasion	(iii) Produced by vertical corrasion.
(iv) found in humid region	(iv) found in dry and arid region.

b) Differentiate between Delta and estuary.

Delta	Estuary
(i) Looks like greek letter 'Δ'	(i) funnel shaped river mouth
(ii) Deposition of sediments take place.	(ii) No deposition of sediments.
(iii) Lesser velocity	(iii) Greater velocity

c) Differentiate between abrasion and attrition.

Abrasion	Attrition
1) Is the process in which river beds and sides are eroded by the carried particles	1) Is the process in which the carried particles like boulder collide with each other and breakdown into smaller pieces
2) Due to abrasion, potholes and plunge pool are formed	2) Due to attrition, smaller particles like sand are formed.
3) Depth and width of river channel increases	3) Depth of river channel get reduced.

d) Compare Endogenetic and exogenetic process.

Endogenetic movement	Exogenetic movement
1) The process which is originated from the interior of the earth and causes the change on the earth surface is known as endogenetic movement.	1) The process which occurs on the earth surface by the natural agents and cause the changes of the shape of the earth surface is known as exogenous process.
2) The process includes compression, tension, upliftment, subsidence etc.	2) The process includes degradation and aggradation.
3) Resultant land forms are rift valley, fold mountain	3) Resultant landforms are flood plain, residual mountain

e) Describe any two landforms developed by river deposition in the middle course.

→ Two landform developed by river deposition in the middle course are -

i) Alluvial fan

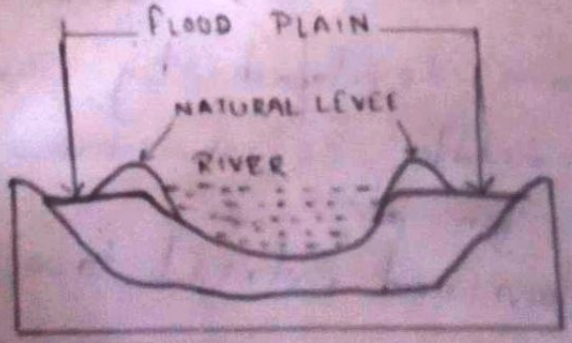
ii) Flood plain and natural levee

Alluvial fan As the river descend from mountains to enter plain its speed as well as its load carrying capacity decreases. So at the junction of upper and middle course river tends to drop the load at the foothills. The load such as sand gravel and stone spread out in a fan shape and is known as alluvial fan.

ALLUVIAL FAN

Flood plain and natural levees - During rainy season when flood occurs the river water wide spread and alluvium and silts also deposited in the surrounding areas of the river valleys. This gradually fills up the low lying areas of both the banks of the river and builds up flood plain.

During the formation of flood plain the deposition also takes place on the banks of the river After a long period river banks are raised, this raised bank are known as natural levees



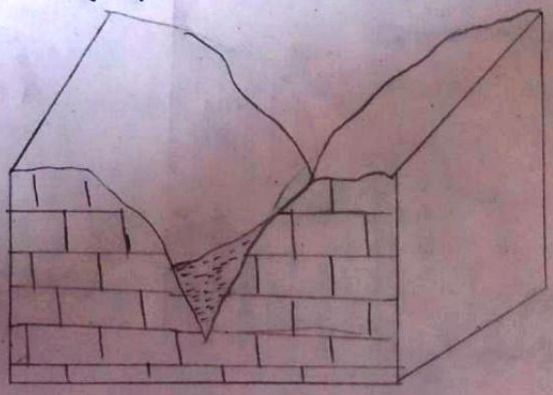
Answer the following questions 5×5 = 25

a) Describe the landforms developed by the fluvial erosion in the upper course (Diagram)

→ Work of a river is done by erosion, transportation and deposition. Erosion cause in formation of many different landforms. ~~The~~ Such are

1) Gorges
2) Canyon
3) Waterfall
4) Interlocking Spurs
5) Rapid

Gorges: Are narrow ~~shaped~~ steep sided V shaped valley produced by lateral and vertical erosion. This are mainly found in humid region. Eg: On River Indus form deep gorge near Gilgit.

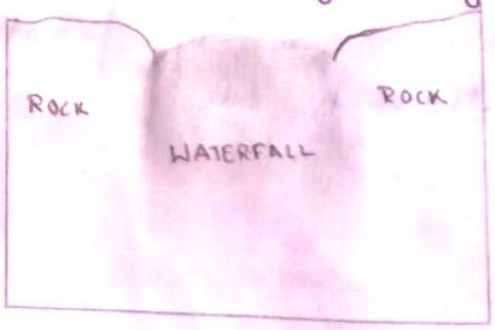


GORGES

Canyon: Canyon are the deep narrow steep sided 'I' shaped valley. It is mainly produced by vertical and lateral erosion in dry and arid region. Eg Grand Canyon..

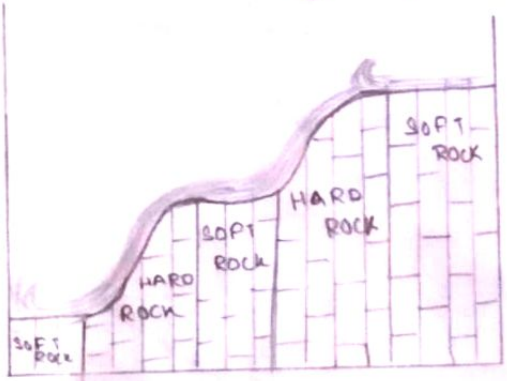
CANYON

Waterfall - When the hard rocks and soft rock are horizontally arranged. Hard rocks lies over soft rocks Due to severe erosion the soft rocks are removed away and hard rock hang over the soft rock layer cause in formation of waterfall. Eg: Yog



WATERFALL

Rapid - When hard rock and soft rock remain vertically against each other. The soft rock ~~are~~ are eroded faster than harder rocks which stand out as a out crop may cause the river to jump across them forming rapid. Eg: River N.L have six rapids.



RAPID

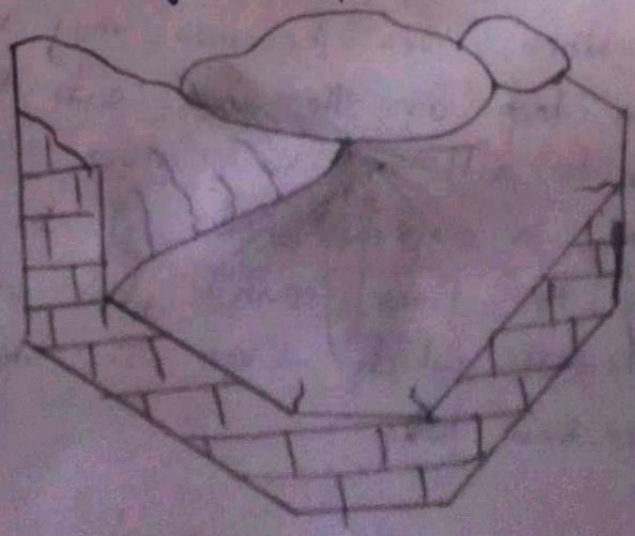
Interlocking spur - The river twist and turn around obstacles of hard rock on the concave bank of the river bend and this ultimately causes spur which lie alternate on each other of river to interlock. The undercut concave banks often standup as river cliffs. High cliffs often interlock each other and the bendy course can't be seen far away off cause in formation of interlocking spur.

b) Explain with suitable sketches the landform developed by fluvial deposition.

→ Landform developed by fluvial deposition in lower and middle course are:

1) Alluvial fan
2) Braided river and sand bar
3) Meander and Ox-bow lake
4) Flood plain & natural levee
5) Delta.

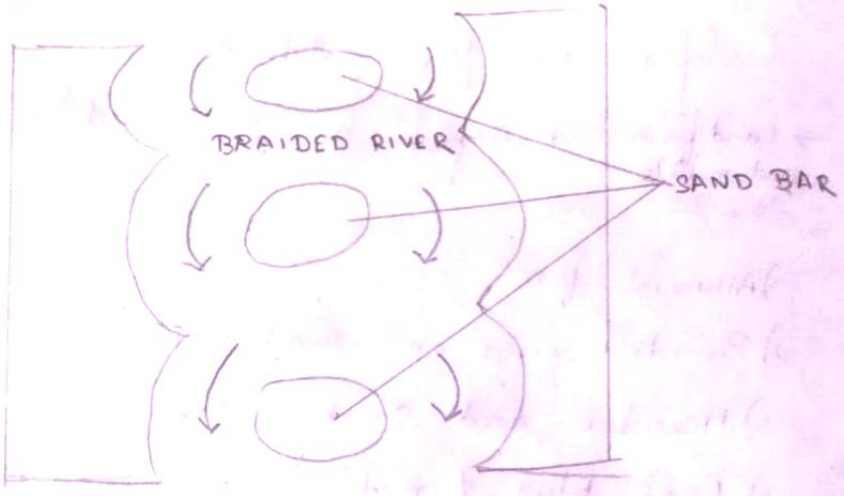
1) Alluvial fan - As the river descend from mountains to enter flat plain its speed as well as its load carrying capicity decreases So at the junction of upper and middle course tends to drop its load at the foothills. The load such as sand, gravel and stone spread out in a fan shape and is known as alluvial fan.



ALLUVIAL FAN

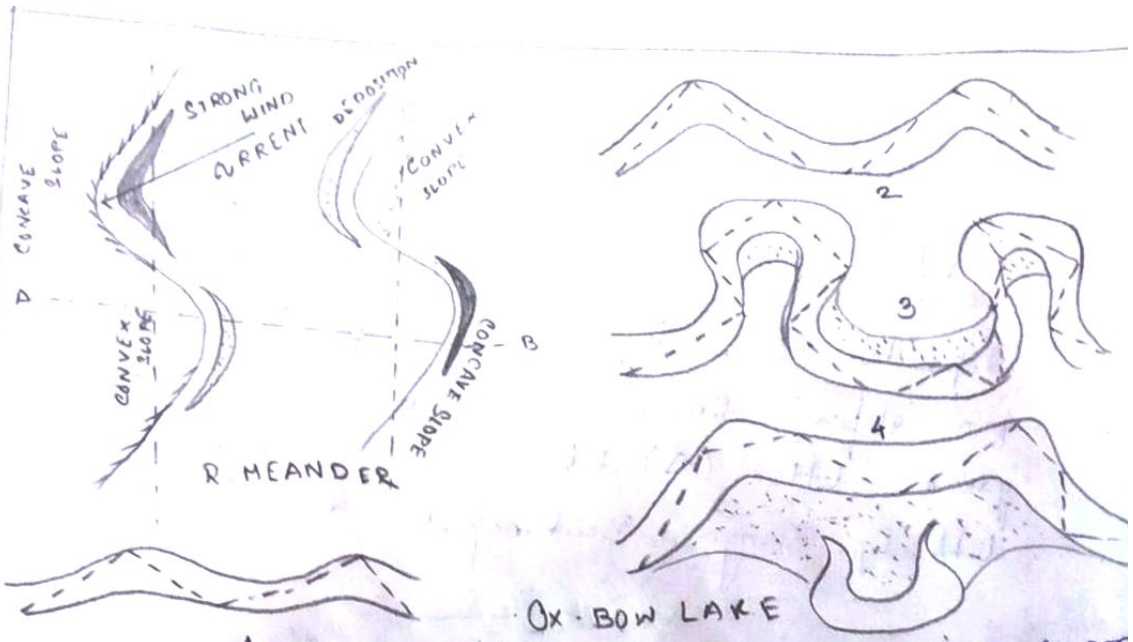
2) Braided river and sand bar - In the middle and lower course sometime river deposit its load on its bed. Due to prolonged deposition of sand, silt and gravel on the bed of the river this looks like island known as sand bar.

Sometimes due to the development of sand bars, the water channel inside the river are divided into two and meeting after channels look like braided channel.

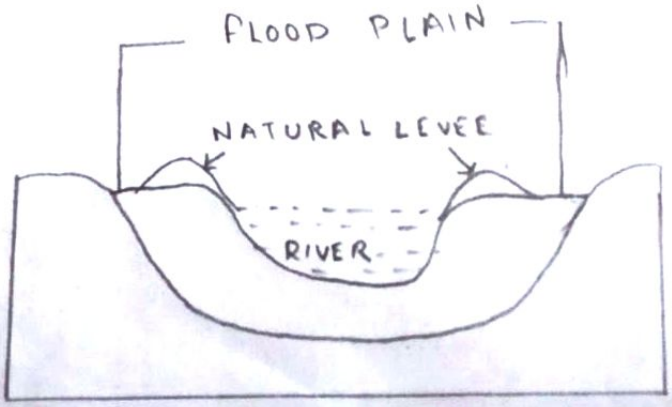


Meander and Ox-bow lake - Due to obstruction and low velocity of the river it flows through winding course which is known as Meander. A cliff is formed where river eroded the bank ie concave side of the meander. Slip-off-slope is formed where river deposits the eroded materials ie the convex side of the meander.

When river becomes very much prominent to form a loop as the river cuts the concave slope and deposits silt on the convex slope of the meander. Finally only a narrow neck of land is left out. Consequently, the river cann't flow straight and leaves its old course which takes a shape of horse-shoe called ox-bow lake



Flood Plain and Natural Levee - During rainy season when flood occurs the river water wide spread and alluvium and silts also deposited in the surrounding areas of the river valleys. This gradually fills up the low lying areas of both the banks of the river and builds up flood plain. During the formation of flood plain the deposition also takes place on the banks of the river. After a long period river banks are raised bank are known as natural leeves.



Flood Plain & Natural Levee

Delta - In lower course, slope of the land decreases remarkable. This cause the river to become sluggish. The load carrying capacity of the river decreases to great extent. and load is ultimately deposited into the sea. the deposition builds up fan shaped alluvial cone which often looks like greek letter (Δ) delta, on it mouth is called delta. Eg: Ganga - Boahmaputa. delta.

e) Explain the feature developed by the river in the lower course (Diagram compulsory)

→ Features developed by river in lower course are.

1) Meander and Ox-bow lake
2) Flood plain and Natural levee
3) Sandbar and braided river
4) Delta.

2) Braided river and sand bar - In the middle and lower course sometime river deposit its load on its bed Due to prolonged deposition of sand, silt and gravel on the bed of the river this looks like island known as sand bar.

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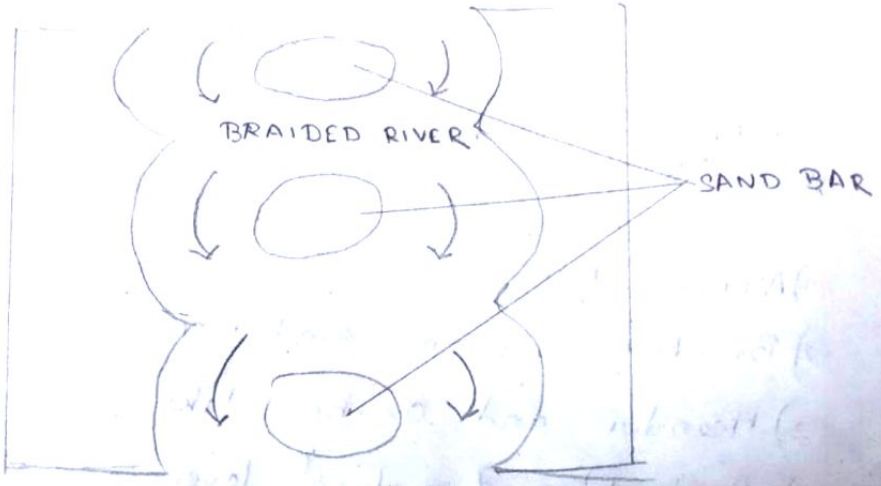

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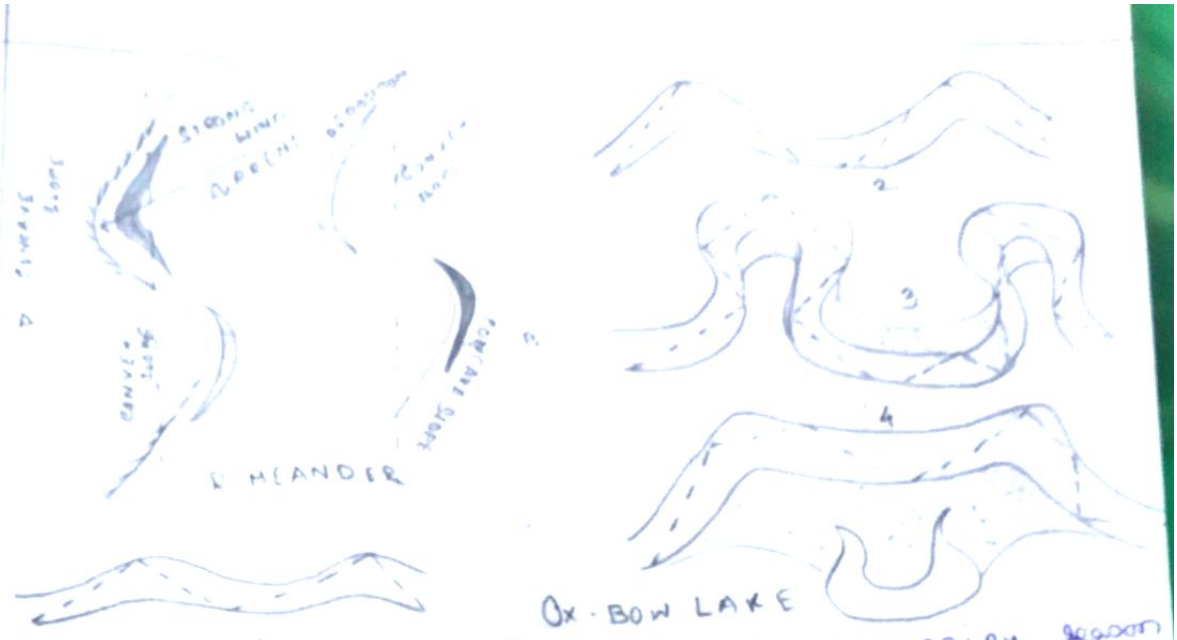

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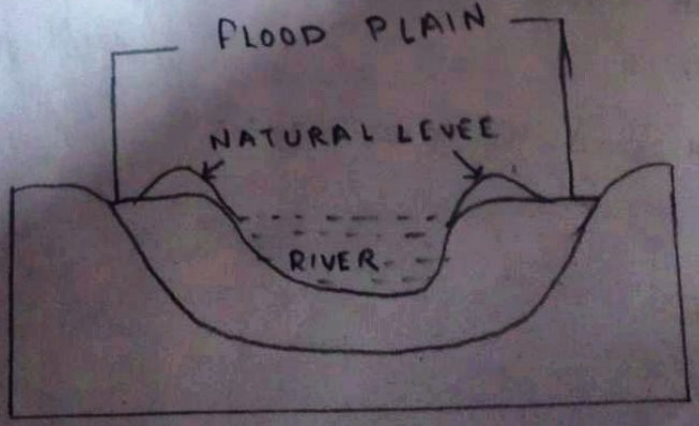

Flood Plain & Natural Levee.

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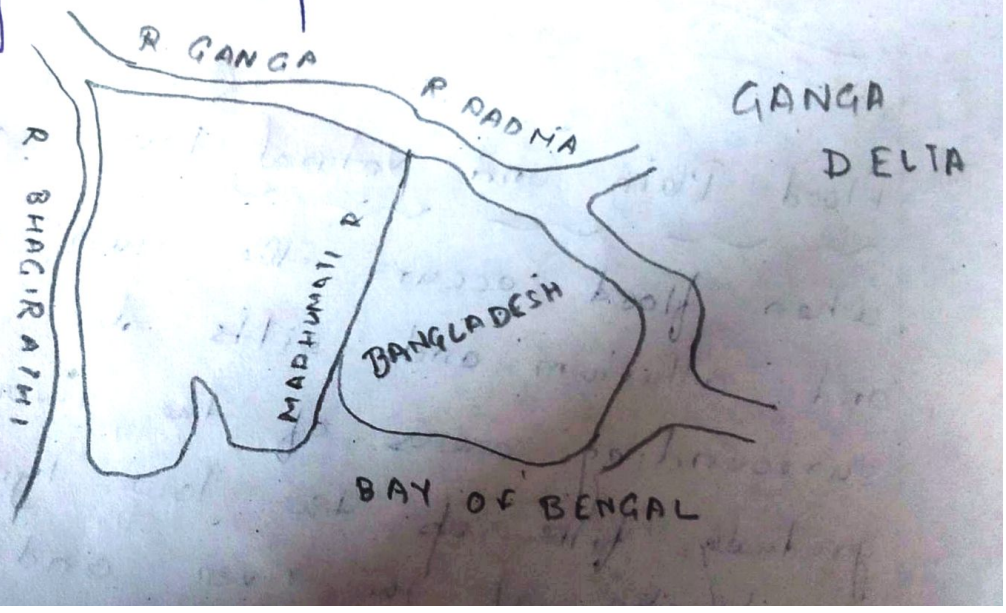

d) Describe the features developed by fluvial deposition in middle course.

→ Landform developed by fluvial deposition in middle course.

1) Alluvial fan
2) Braided river and sand bar
3) Meander and ox-bow lake
4) Flood plain & Natural levee.

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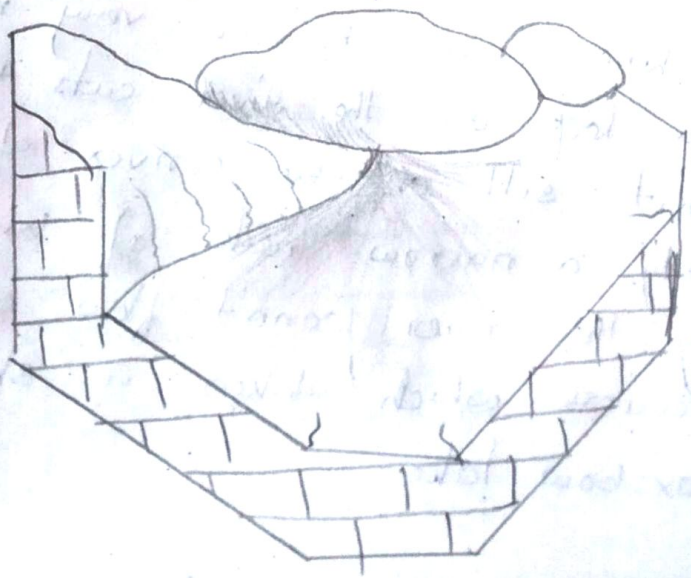

ALLUVIAL FAN

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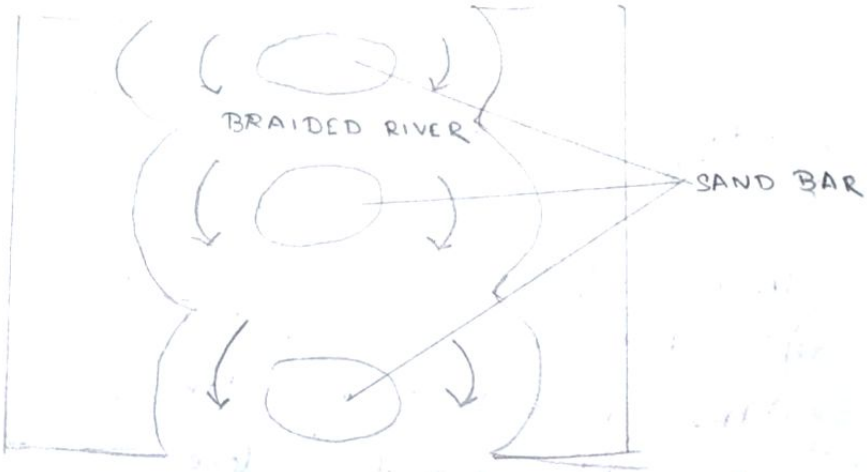

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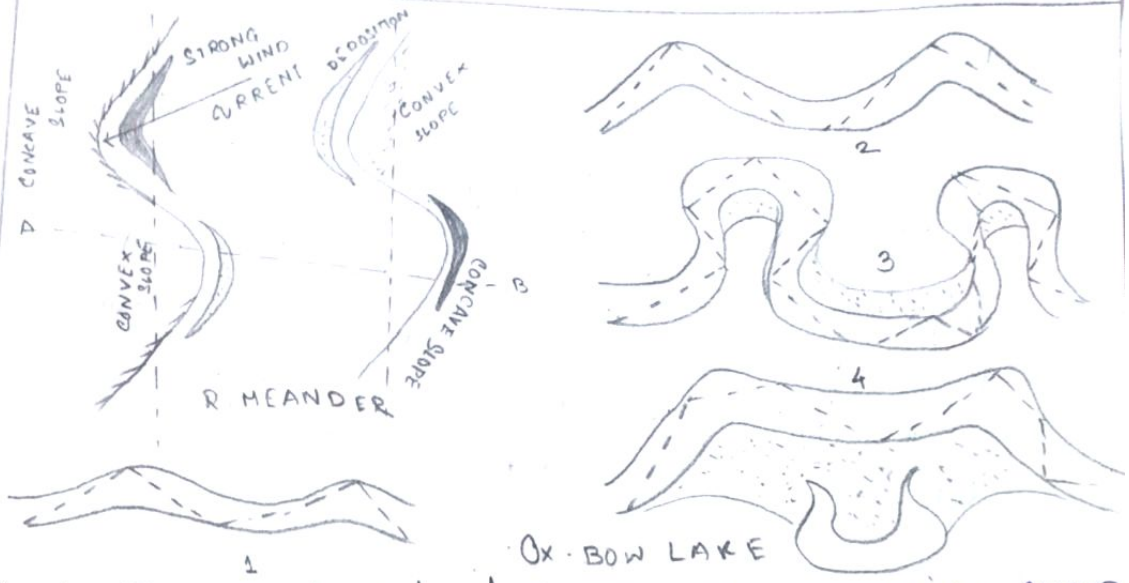

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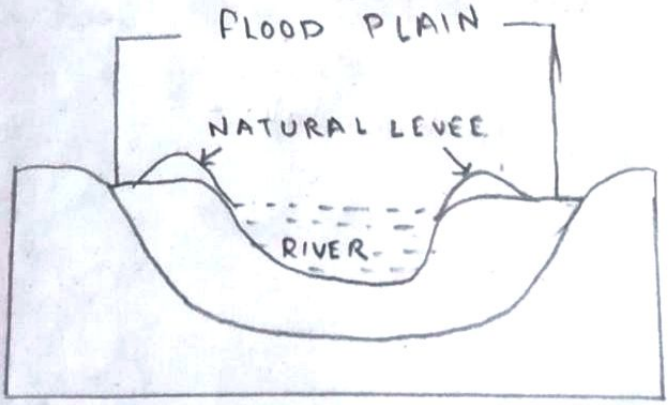

Flood Plain & Natural Levee

c) Describe the formation of ox-bow lake and flood plain with suitable diagram.

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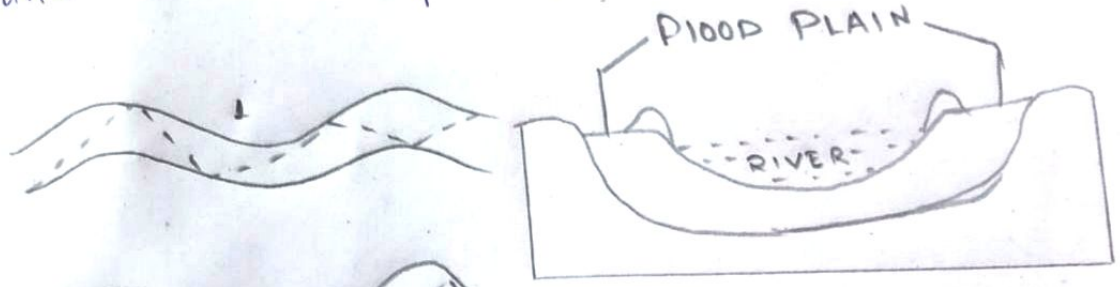
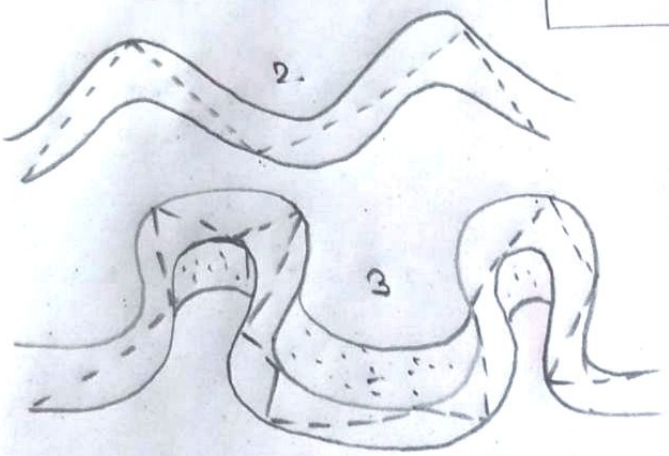


FLOOD PLAIN



OX-BOW LAKE