INTRODUCTION
Various medicinal plants have been used for years in daily life to treat diseases all over the world. Interest in medicinal plants reflects the recognition of the validity of many traditional claims regarding the value of natural products in healthcare. *Cassia fistula* L. (*Leguminosae*), a semi-wild Indian Laburnum (also known as the Golden Shower), is distributed in various countries including Asia, South Africa, Mexico, China, West Indies, East Africa and Brazil. It is an ornamental tree with beautiful bunches of yellow flowers. This plant is widely used by tribal people to treat various ailments including ringworm and other fungal skin infections. It is used by Mahalis tribe in India to treat nasal infection. The pulp of the ripe fruits has a mild, pleasant purgative action and is also used as an anti-fungal drug. Indian people are using the leaves to treat inflammation, the flowers as a purgative, the fruit as an anti-inflammatory, antipyretic, abortifacient, demulcent, purgative, refrigerant, the plant is good for chest complaints, eye ailments, flu, heart and liver ailments and rheumatism. It is useful in treating haematemesis, pruritus, eczema and diabetes. Besides its pharmacological uses, its extract is also recommended for pest and disease control. *Cassia fistula* exhibited significant antimicrobial activity and showed properties that support folkloric use in the treatment of some diseases as broad-spectrum antimicrobial agents. The whole plant is used to treat diarrhea; seeds are used to treat skin diseases, flowers and fruits are used to treat skin diseases, fever, abdominal pain, leprosy by traditional people. *Cassia fistula* plant parts are known to be an important source of secondary metabolites, notably phenolic compounds. Fistucacidin, 3,4,7,8,4′-pentahydroxyflavan was first extracted from the heartwood. Kaempferol and a proanthocyanidin have been isolated from the acetone extract of the flowers. A bianthraxaquione glycoside, fistulin together with kaempferol and rhein have been isolated from ethanol extracts of *Cassia fistula* flowers. Besides phenolics and their derivatives, a certain amount of alkaloids have also been reported in the flowers. Traces of triterpenes have been observed in both flowers and fruits. A compound, 3β-hydroxy-17-norpinamar(8(9)-en-15-one was isolated from the pods of *Cassia fistula*. In the present study we screened the antibacterial and antifungal activity, the results of the antibacterial and antifungal activity of different solvent extract of *Cassia fistula* pod, leaves, and an isolated compound.

EXTRACTION AND ISOLATION
The leaves, pod, bark were collected from Melghat forest region where they are get separated as leaves, flowers, bark, pod and all of them shade dried at room temperature and ground in a manual mill the powder was kept in a air tight polythene bags and extracted with water, methanol, petroleum ether, and separated the acid and non acid contain of the every extract.

MICROORGANISM
The microorganisms which are used for the antibacterial activity were brought from National Chemical Laboratory Pune these are as follows. Bacteria :- *Escherichia coli* NCIM No. 2931, ATCC No. 25922, *Staphylococcus aureus* NCIM No. 5021, ATCC No. 25923, *Bacillus subtilis* NCIM No. 2063, ATCC No. 6633, *Pseudomonas aeruginosa* NCIM No.2036, ATCC No.19429.

ANTIMICROBIAL ASSAY
The methanol, water, petroleum ether extracts (semisolid masses and dry powder) were examined for their antibacterial potency by Cup plate agar method against four bacterial species. The bacterial specimens were collected from National Chemical Laboratory, Pune. The extracts were dissolved in methanol, water, and petroleum ether to obtain a concentration of 200 mg/ml. The boars (6 mm in diameter) were prepared by sterile borer. Petri plate were prepared with 25ml sterile Mueller Hinton Agar. The test culture were swabbed on the top of the solidified media and allowed to dry for 10 minutes. The tests were conducted at 200 mg/ml concentration of the extract. The negative control was prepared using respective solvent. Ampicillin disc (10 mcg/disc) and Vancomycin disc (30 mcg/disc) were used as positive control. The petridishes were then incubated at 37°C for 24 hrs. The zone of inhibition was recorded in millimetres by using Himedia Zone Reader Scale.

RESULT AND DISCUSSION
Crude Petroleum ether, methanol and water extracts of *Cassia fistula* leaves and pod were tested against bacteria *Staphylococcus aureus*, *Escherichia coli*, *Bacillus subtilis*, and *Pseudomonas aeruginosa*. The results indicated that the tested crude extracts showed antibacterial activity towards the bacteria. From above result it is found that the water extract of leaves and petroleum ether extract are give good result against *Staphylococcus aureus* only but no activity against other bacterial species. Water extract of pod show good to moderate antibacterial activity against *bacillus subtilis* and *Pseudomonas aeruginosa*, like that acid content of leaves show good activity against *Escherichia coli*, *Staphylococcus aureus*, *Pseudomonas aeruginosa* and non active against *bacillus subtilis*, but in the contrary the acid content of pod show good to moderate activity against all bacterial species.
Table 1: Antibacterial activity of different extract of the plant cassia fistula

<table>
<thead>
<tr>
<th>Extracts</th>
<th>Concentration</th>
<th>Inhibitory zones (mm)</th>
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<tbody>
<tr>
<td></td>
<td></td>
<td><em>Escherichia coli</em></td>
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<tr>
<td>Water extract (leaves)</td>
<td>200mg/ml</td>
<td>AB</td>
</tr>
<tr>
<td>Petroleum ether extract (leaves)</td>
<td>200mg/ml</td>
<td>AB</td>
</tr>
<tr>
<td>Water extract (pod)</td>
<td>200mg/ml</td>
<td>AB</td>
</tr>
<tr>
<td>Acid contain of (leaves)</td>
<td>200mg/ml</td>
<td>16</td>
</tr>
<tr>
<td>Acid contain of (pod)</td>
<td>200mg/ml</td>
<td>20</td>
</tr>
<tr>
<td>Non acid contain of (leaves)</td>
<td>200mg/ml</td>
<td>AB</td>
</tr>
<tr>
<td>Methanol extract of leaves</td>
<td>200mg/ml</td>
<td>19</td>
</tr>
<tr>
<td>Methanol extract of pod</td>
<td>200mg/ml</td>
<td>16</td>
</tr>
<tr>
<td>Control (Methanol)</td>
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<tr>
<td>Control Ampicillin</td>
<td>30</td>
<td>19</td>
</tr>
<tr>
<td>Control Vancomycin</td>
<td>20</td>
<td>13</td>
</tr>
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Fig. 1: Zone of inhibition shown by control Ampicillin and Vancomycin against E.coli
Fig. 2: Zone of inhibition shown by control Ampicillin and Vancomycin against S.a.
Fig. 3: Zone of inhibition shown by H & F against E.coli
Fig. 4: Zone of inhibition shown by B & H against E.coli
Fig. 5: Zone of inhibition shown by E & F against S.a.
Zone of inhibition shown by bacteria *Bacillus subtilis*
Fig. 6: Zone of inhibition shown by C & D against Bacillus s.
Fig. 7: Zone of inhibition shown by control Vancomycin and Ampicillin against Bacillus s.
Fig. 8: Zone of inhibition shown by G & H against B. s.
REFERENCES